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MYOCARDIAL INFARCTION IN YOUNGER AGE GROUPS

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With the successive advent of our modern antibiotics and chemotherapeutic agents, one infectious disease entity after another has been conquered. Many of our most deadly illnesses have been virtually eradicated. This remarkable progress has been aided by advances in preventive medicine and public health. Today, many surgical procedures are almost routine, which only ten years ago were relegated to the realm of phantasy. As a consequence of these developments, there has occurred a dramatic prolongation of life expectancy. More and more the primary problems of medicine are becoming those of a geriatric, or old age, population. At present the two major challenges confronting the medical profession are cardiovascular disease and cancer. It is important to realize, however, that five times as many persons die each year of the former condition as from all forms of malignancy combined.¹ The most commonly fatal type of cardiovascular disease is coronary atherosclerosis.

It was believed that some light might be thrown upon the natural history of this enigma by studying its pathogenesis, clinical picture, laboratory manifestations, and prognosis in young individuals. Only by understanding the pathologic physiology of an abnormal process is it possible to devise an adequate therapeutic regimen against it. Therefore, the records of the Maxwell Air Force Base Hospital were reviewed. Thirty-four patients having a proven myo-

cardial infarction were observed within the four-year period from January 1, 1951 to January 1, 1955. All of these individuals were males, as would be expected in the military service. Of definite significance was the fact that not one of these patients was a Negro, despite the fact that more than 15% of admissions to the hospital were colored. There is a decided difference of opinion in the current literature as to the incidence of coronary occlusion in Negroes.²⁻⁴ Paul White states that there is no racial difference, while others believe that the frequency in Negroes is only 70% of that in Caucasians. The findings in the present series are therefore quite important.

Age is generally regarded as an important factor in the pathogenesis of myocardial infarction. This condition occurs most frequently in males in their late fifties.² However, those who have witnessed many autopsies are aware that coronary atherosclerosis may occur much earlier. This was strikingly illustrated by the recent work of Enos, who demonstrated that 77% of American soldiers killed in Korea had evident coronary atheromata.⁵ Nonetheless, Yater, in 1948, after an exhaustive review of the world literature, could find only some 450

2. White, P. D.: Heart Disease, ed. 4, The Macmillan Company, New York, 1951.

3. Smith, C.; Sauls, H. C., and Ballew, J.: Coronary Occlusion; A Clinical Study of 100 Patients, *Ann. Int. Med.* 17: 681, 1942.

4. Hunter, W. S.: Coronary Occlusion in Negroes, *J. A. M. A.* 131: 12, 1946.

5. Enos, W. F.; Holmes, R. H., and Beyer, J.: Coronary Disease Among United States Soldiers Killed in Action in Korea; Preliminary Report, *J. A. M. A.* 152: 1090, 1953.

Read before the Association in annual session, Montgomery, April 22, 1955.

1. Harrison, T. R.: Principles of Internal Medicine, The Blakiston Company, Philadelphia, 1951.

reports of coronary occlusion occurring under the age of 40.⁶ Therefore, the present series is significant. Table 1 shows the age of the 34 patients included in this study.

TABLE 1
AGE RANGE OF PATIENTS

Number of patients between 20 and 29 years	3
Number of patients between 30 and 39 years	11
Number of patients between 40 and 49 years	12
Number of patients between 50 and 59 years	5
Number of patients between 60 and 65 years	3
Number of patients 40 or less years of age	17
Number of patients 41 or more years of age	17
Total number of patients	34

Seventeen were 40 years of age or less, while an equal number were older.

Many cardiologists believe that there is no climatic influence on the incidence of coronary occlusion; others feel that this condition is more common during the winter and late fall.^{7,8} In the only other study dealing with young military personnel, it

TABLE 2
SEASONAL INCIDENCE OF INFARCTION

Winter	2
December	0
January	1
February	1
Spring	12
March	4
April	3
May	5
Summer	12
June	4
July	2
August	6
Fall	9
September	2
October	5
November	2

was suggested that myocardial infarction might occur somewhat more frequently in the southeastern United States during the summer months.⁶ The present investigation in Alabama revealed an equal inci-

6. Yater, W. M.; Traun, A. H.; Brown, W. C.; Fitzgerald, R. P.; Geiser, M. A., and Wilcox, B. B.: Coronary Artery Disease in Men 18 to 39 Years of Age; Report of 866 Cases; 450 With Necropsy Examinations, *Am. Heart J.* 36: 334, 1948.

7. Bean, W. B., and Mills, C. A.: Coronary Occlusion, Heart Failure, and Environmental Temperatures, *Am. Heart J.* 16: 701, 1938.

8. Master, A. M.; Dack, S., and Jaffe, H. L.: Factors and Events Associated With Onset of Coronary Thrombosis, *J. A. M. A.* 109: 546, 1937.

dence in the spring and summer, a slight reduction in the fall, and a definite decrease in the winter (Table 2). Not a single case occurred in December, while only one was observed in January and February. Most attacks were in August, May, and October. Even though this series is relatively small, these findings are significant.

Whether unusually strenuous activity can result in myocardial infarction is still hotly debated.² Today, this is one of the most important medicolegal questions in industrial medicine. It is generally believed that any association between coronary occlusion and effort is purely fortuitous.⁹ Table 3

TABLE 3
IMMEDIATELY PREDISPOSING FACTORS

Unusual muscular effort	6
(within 24 hours)	
Following a meal	6
(within 30 minutes)	
Awaken from sleep	6
Performing usual work	7
Walking	3
Following strenuous social functions	3
Associated with concurrent infection	3

represents possible predisposing factors occurring in the 24 hours before the attack in the 34 cases studied at Maxwell Air Force Base. It would appear that unusual activity may possibly be important in the pathogenesis of myocardial infarction.

The occupations of these patients are recorded in Table 4. Twenty-one had administrative or sedentary employment, 8 performed light to moderate labor, 3 carried out heavy labor, and 2 were retired. It is

TABLE 4
TYPE OF OCCUPATION

Administrative	21
(Sedentary)	
Light to moderate labor	8
Heavy labor	3
Retired	2

interesting to note that 4 of the 6 infarctions that occurred after unusually strenuous effort were in persons who had previously held "desk jobs" for several years.

The time of day at which occlusion occurs is believed to be a matter of chance.² Yet,

9. Master, A. M., and Jaffe, H. L.: Factors in the Onset of Coronary Occlusion and Coronary Insufficiency; Effort, Occupation, Trauma, and Emotion, *J. A. M. A.* 148: 794, 1952.

the only other recent series involving young individuals, namely that of Yater, suggests that infarction may occur somewhat more frequently during the active hours of the day.⁶ Certainly that was found to be true

TABLE 5
TIME OF INFARCTION

7:00 A. M. to 7:00 P. M.	22
7:00 A. M. to 1:00 P. M.	12
1:00 P. M. to 7:00 P. M.	10
7:00 P. M. to 7:00 A. M.	12
7:00 P. M. to 1:00 A. M.	6
1:00 A. M. to 7:00 A. M.	6

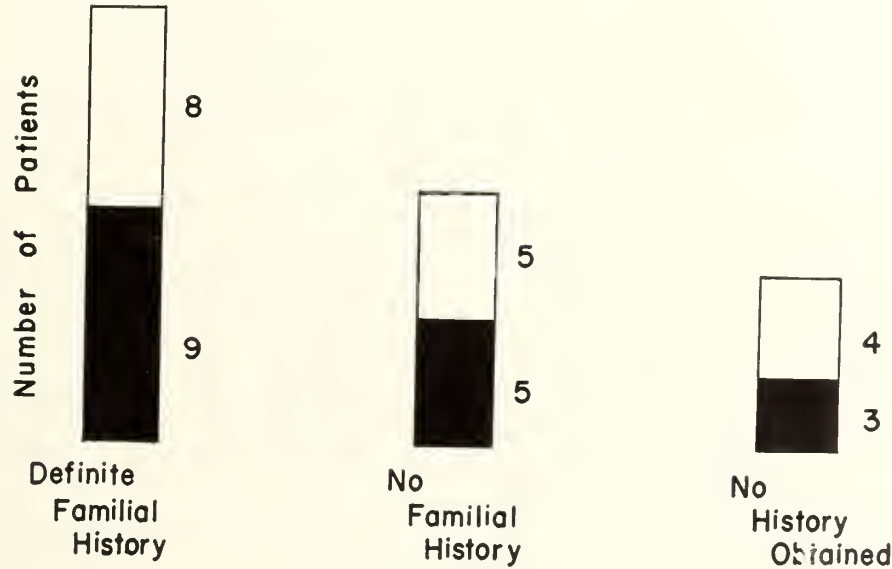
in the present study (Table 5). This observation also suggests that activity may be of importance in the development of coronary occlusion.

It is well documented that coronary artery disease is especially prevalent in certain families.² This was found to be true in the present study, as is represented in

2) 22 patients, that is, 65% of cases, were above average weight, as based on the tables in Duncan's "Diseases of Metabolism."¹⁰ Fifteen per cent were within normal limits and 15% were below average. In two cases, or 5%, the weight and height were not recorded. Obesity appears to be definitely related to myocardial infarction.

For many years the role of tobacco in cardiac disease has been vigorously debated.² In this series only one person was a non-smoker, while 18, or over 50%, used more than one pack of cigarettes per day. This is illustrated in Chart 3. It would appear that the excessive use of tobacco may be of importance in the pathogenesis of coronary artery disease.

The 34 patients suffering from a myocardial infarction were investigated with regard to the use of alcoholic beverages. As is recorded in this chart, only 3 were complete abstainers, while 11 were heavy



FAMILIAL INCIDENCE OF CARDIOVASCULAR DISEASE

CHART 1

Chart 1. There was a definite familial history in 17, or 50%, of our cases. In 10 instances, or 29%, this was not so, while in 7 cases, or 21%, no history was obtained by the physician. As is indicated in Chart 1, there was no significant difference between the two age groups.

Obesity has been generally regarded as predisposing to coronary artery disease and myocardial infarction.² In this study (Chart

drinkers. These observations are recorded in Chart 4 and are quite interesting.

It should be mentioned that hypertension was present prior to infarction in only 4 cases, that is, 12%. Of these, 3 were over 50 years of age. One was 36.

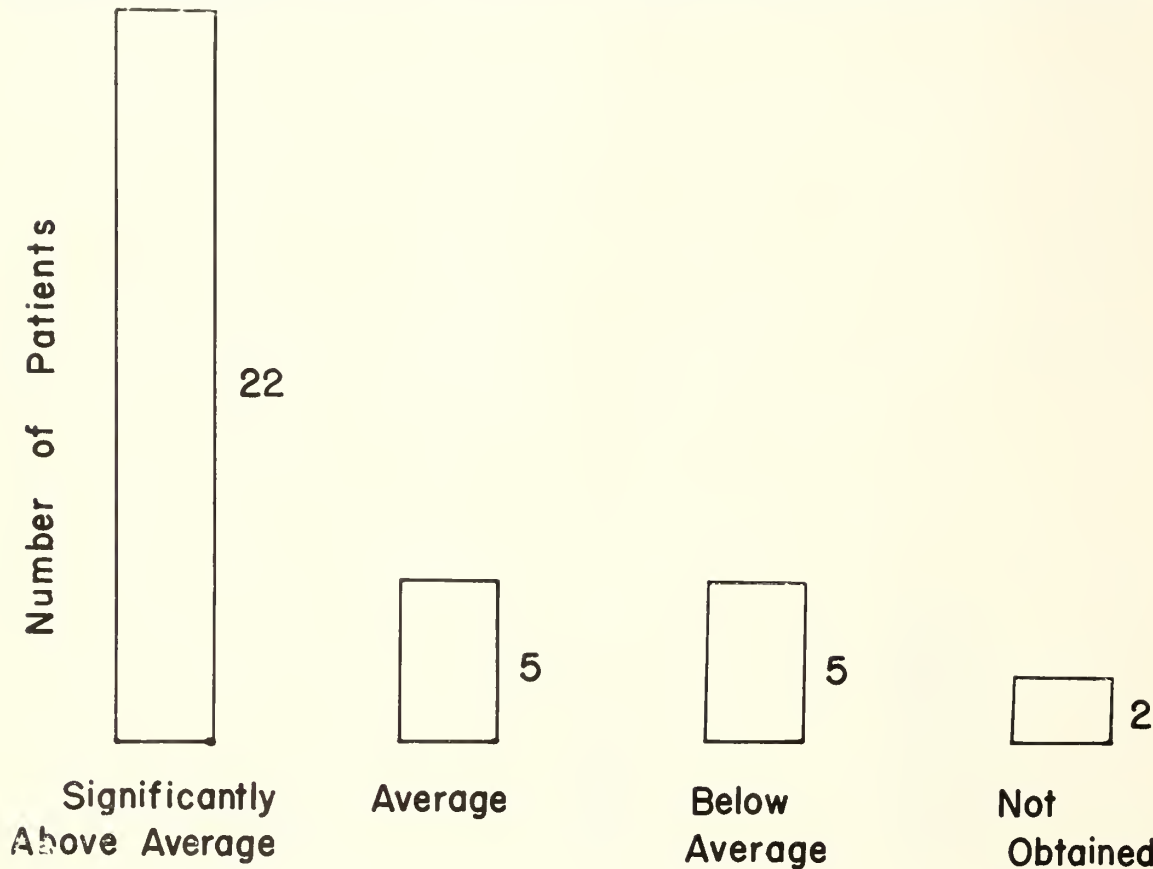
An attempt was made to compare the

10. Duncan, G. G.: Diseases of Metabolism, ed. 2, W. B. Saunders Company, Philadelphia, 1947.

clinical picture in those 17 patients 40 years or under with that observed in the equal number above this age. The relative incidence of prodromata was interesting. Within ten days prior to the attack such symptoms as transient precordial pain, temporary left shoulder discomfort, heartburn, indigestion, extreme weakness, easy fatigability, and epigastric pain were noted by

disappeared within 6 hours. In the middle category extreme pain disappeared within 24 hours, while in those listed as critically ill it was present for more than one day.

Four patients in the younger age category did not report to Sick Call or the dispensary for 20 hours to 11 days after the attack. In one instance a 29-year-old man pushed his stalled automobile and developed severe



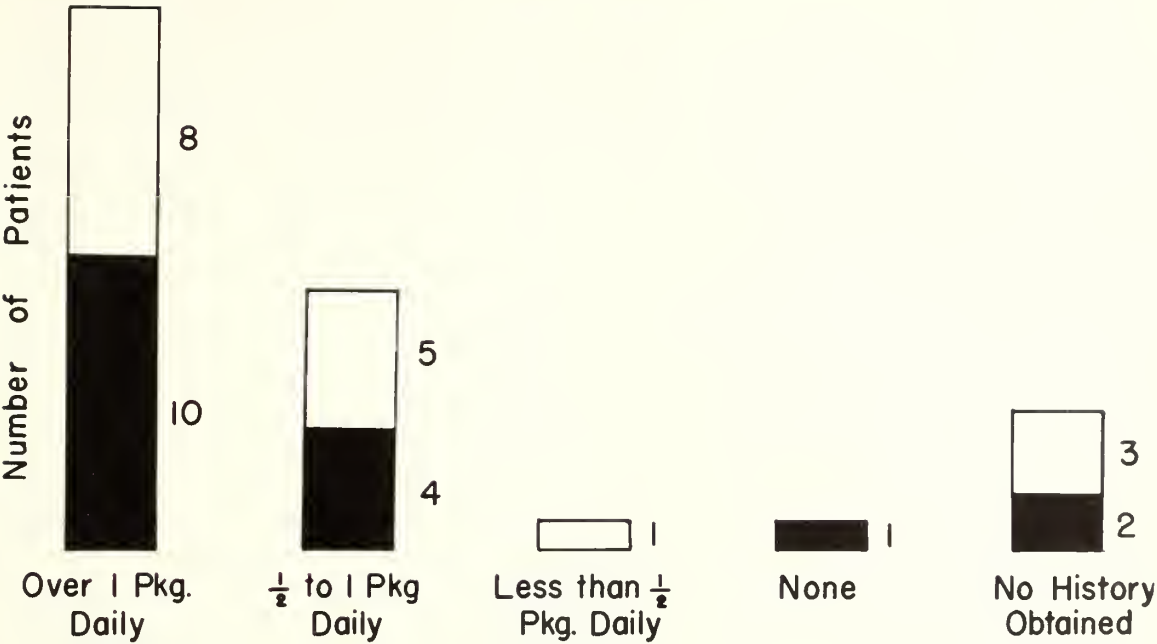
BODY WEIGHT
(Correlated with Age and Height)

CHART 2

5 patients 40 years of age and under as against only 2 in the older group.

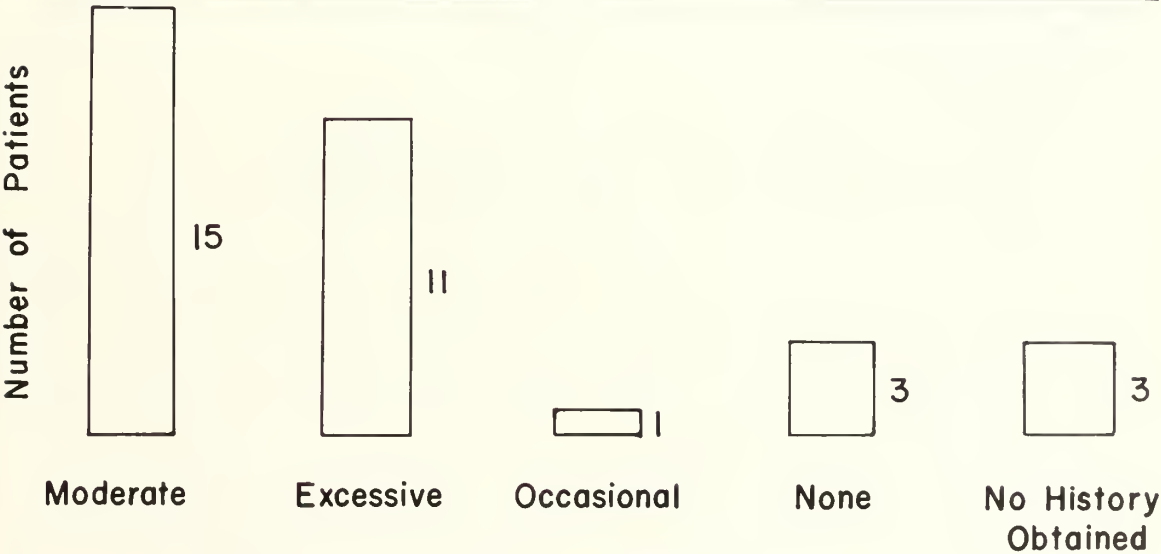
A comparison of the severity of the attack in the two age groups is represented in Chart 5. The degree of severity was based on the occurrence of shock, persistence of pain, development of arrhythmias, and the onset of congestive failure. In those cases listed as mild, severe discomfort did not persist over 2 hours and essentially all pain

anterior chest pain which radiated into the neck and jaw and was associated with nausea, vomiting, and excessive perspiration. These symptoms passed off in 10 minutes with rest. The airman then drove 300 miles and did not report to Sick Call until 11 days later. At that time he was complaining of palpitation. Another patient, aged 38, developed dyspnea, chest pain that radiated down both arms, nausea, and per-



USE OF TOBACCO

CHART 3



USE OF ALCOHOL

CHART 4

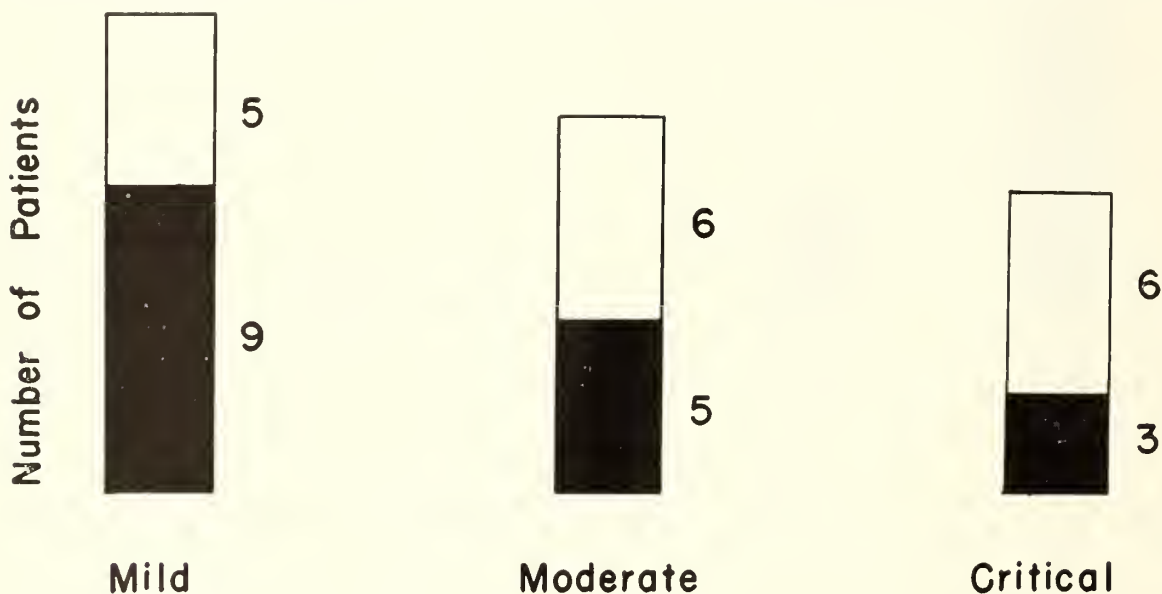
spiration while running from a train with his luggage. A physician was summoned who prescribed sodium bicarbonate and a laxative. The patient continued on his journey within the hour and finally reported to Sick Call 3 days later because of

epigastric discomfort. Two others, aged 26 and 38 respectively, did not seek medical aid until 20 and 48 hours after infarction; one complained of palpitation, the other of persistent heartburn. In a fifth case, transient nausea, dizziness, and perspiration

were the only symptoms noted. This 27-year-old man was the laboratory technician on call and the medical officer of the day somewhat facetiously ordered an electrocardiogram and so made the diagnosis. In only one case in the older group did the patient fail to present himself for treatment within 2 hours of the attack.

oped in a 35-year-old patient.

An evaluation of the temperature chart in all cases revealed that no person 41 years of age or more had over 102.4 degrees, as compared with 102.2° in the younger group. In both age categories the highest level was reached at 36 to 72 hours. Of definite diagnostic significance is the fact that



SEVERITY OF ILLNESS

CHART 5

It would appear that myocardial infarction in younger individuals tends to be milder than in older persons. Of practical importance is the fact that such a clinical syndrome in a young person may be misdiagnosed unless the possibility is considered and appropriate studies obtained. It is interesting, I believe, to observe that in 31 of our 34 cases no cardiac murmur was detected. In 2 persons, aged 63 and 65 respectively, a grade II systolic aortic murmur was heard. In one patient, 32 years of age, a grade I mitral systolic murmur was noted. Not a single diastolic murmur was recorded; moderate cardiomegaly was present in three cases. There was no history of rheumatic fever in any instance. Premature ventricular contractions occurred in 2 patients in both age groups. Bigeminy was caused by these extrasystoles in a 65-year-old male. Congestive failure did not occur, while a transient pericardial friction rub devel-

oped in a 35-year-old patient.

Serial sedimentation rate determinations, using the Wintrobe method, were obtained in all cases in the two age groups (Figure 1). A comparison of results is quite interesting. In the younger patients the increase was less marked and the return to normal limits was sooner (approximately 4 weeks). In the older individuals the rise was greater and at 2 months this test was still abnormally high. Therefore, this laboratory procedure is of limited value in following the course of an elderly patient suffering from coronary occlusion.

Serial white blood cell determinations were, also, compared in Figure 2. In both groups of patients there was a rise, with the peak being reached at 24-48 hours. Just as with the sedimentation rates, the leukocyte

counts did not increase as much in the younger patients and they tended to return to normal at an earlier period.

eral, and in 2 a posterolateral. There was no significant difference in the two age groups.

SERIAL SEDIMENTATION RATE DETERMINATIONS

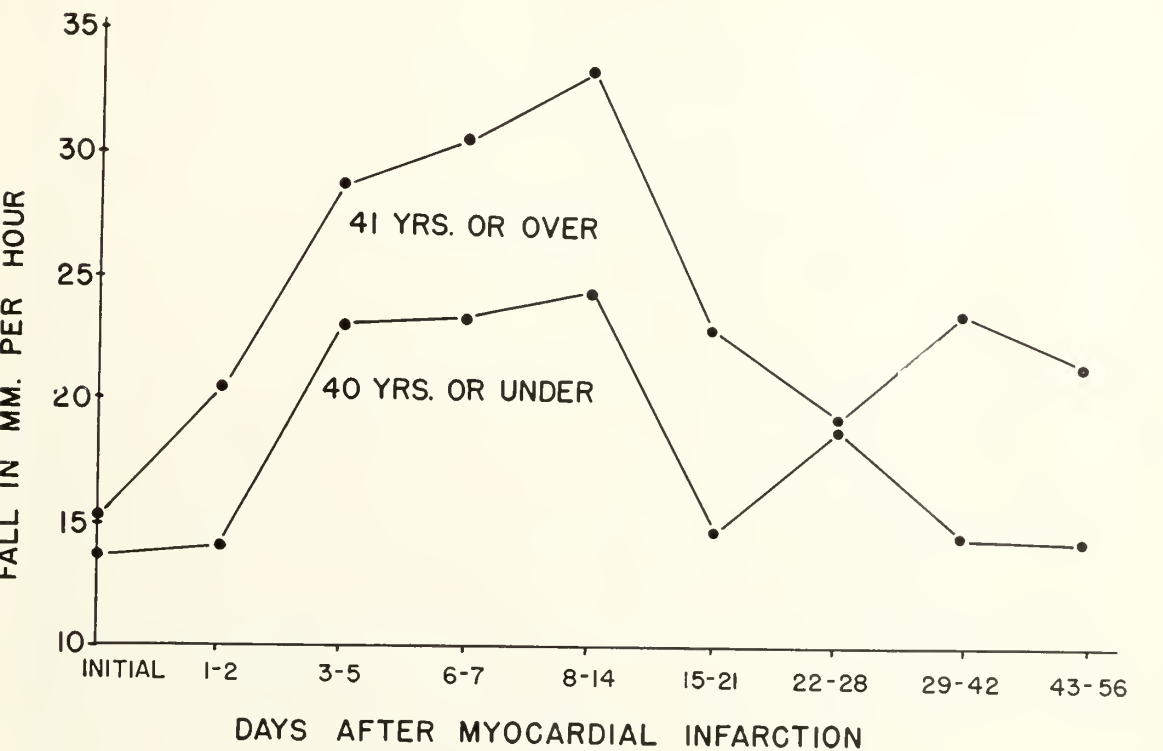


FIGURE 1

Two patients in this series died before an electrocardiogram could be obtained—one was in the younger group, one was in the older. In the remaining 32 cases, serial cardiograms disclosed the characteristic changes of myocardial infarction. It is interesting to note that in one patient 48 years old the tracing was normal at 2 hours, at 24 hours, and at 48 hours following the attack. It did not become abnormal until 96 hours and was not diagnostic till the fifth day. In 10 instances the cardiogram was abnormal, but not diagnostic. within the initial 12 hours; this number was increased to 16 at 24 hours. In 7 cases the tracing became diagnostic within the first 12 hours, and this figure was increased to 12 at 24 hours. Twenty-three tracings were diagnostic at 48 hours, 31 at 96, and all at 5 days. These results emphasize the importance of serial tracings. It may be interesting to note that in 16 cases there was an antero-septal infarction, in 7 a massive posterior, in 6 a massive anterior, in 3 an anterolat-

Eight patients included in this study died, giving a mortality rate of 24% (Table 6). However, 5 of these cases were in the older

TABLE 6 DEATHS		
Officers		0
Enlisted men		5
34 years of age		
39 years of age		
39 years of age	Average age at death—	
46 years of age	40.8 years	
46 years of age		
Non-military personnel		3
63 years of age		
65 years of age	Average age at death—	
65 years of age	64.3 years	
Total		8
Average age at death		49.6 years

group; only 3 were 40 years of age or under. Therefore, the mortality rate in the younger group was only 18%, as compared with 29% in the older patients.

At the time of hospitalization, all of the

cases included in this series were suffering from their initial myocardial infarction.

3. Physical findings relative to the cardiovascular system may be very minimal.

SERIAL WHITE BLOOD CELL DETERMINATIONS

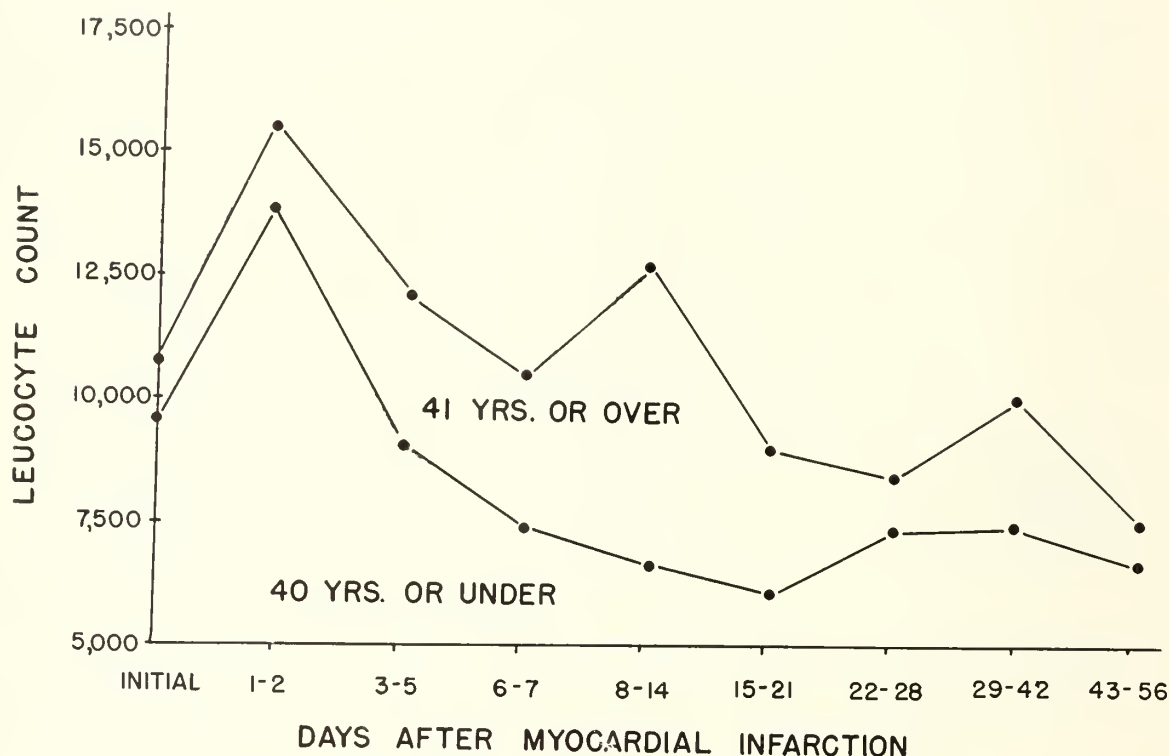


FIGURE 2

SUMMARY

A study of 34 cases of myocardial infarction observed at the Maxwell Air Force Base Hospital during a four-year period disclosed a definite racial factor. Not a single coronary occlusion occurred in a Negro patient. While the present series is rather small, it suggests that not only age, race, familial history, and obesity are important in the pathogenesis of coronary occlusion, but also that the excessive use of tobacco and alcohol, as well as unusually strenuous activity, may be of significance. Of practical importance to us in Alabama is the fact that myocardial infarction tends to occur more commonly in this area during the warmer seasons. It would appear that the diagnosis of myocardial infarction in young persons may quite often be overlooked for several reasons:

1. It is generally regarded as being quite uncommon, and so is not considered.
2. The clinical picture may be definitely atypical.

Serial electrocardiograms, sedimentation rates and white blood cell counts are frequently required to establish the diagnosis definitely. No laboratory procedures, however, can substitute for clinical observation and alertness. The present study clearly indicates that exhaustive clinical and pathologic investigations are essential for the effective control of our greatest medical menace, coronary artery disease.

Physicians Seek Facts on Leukemic Twins—

Two Minneapolis physicians have urged their colleagues to report cases of leukemia, a serious blood disease, when it occurs among twins, since evidence about hereditary factors in the disease is scarce.

They estimated that over a 10-year period there would be no more than about 450 cases of leukemia among twins in this country. They also said the chances of leukemia occurring in each of a set of identical twins appears to be about one in 2,000. Reports showing the exact incidence of the disease among twins could help to establish whether heredity is a prime factor, a secondary factor, or of no importance in the development of the disease.

CURRENT ADVANCES IN DIAGNOSIS AND TREATMENT OF ESOPHAGEAL HIATAL HERNIA AND ACHALASIA OF THE ESOPHAGUS

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ESOPHAGEAL HIATAL HERNIA

The increase in the standard of living which our nation has enjoyed in the past half century has brought with it a prolongation of the life span of man and an increase in the incidence of obesity. Both the aging process and obesity encourage the attenuation and relaxation of bodily tissues, factors which play an important role in the development of hernia through the esophageal hiatus.

Esophageal hiatal hernia is one of the most interesting and, at times, one of the most perplexing lesions involving the gastrointestinal tract. It is of interest not only because of the frequency with which it occurs but because of the many and various symptoms which it may produce. My experience and that of my associates at the Mayo Clinic would seem to indicate that it occurs in at least 1½ per cent of the population, which would mean that between 1,500,000 and 2,000,000 people in the United States suffer from such a condition.

A marked difference of opinion exists among observers as to the frequency with which esophageal hiatal hernia causes symptoms. Roentgenologists are prone to regard it as an accidental finding and an infrequent cause of trouble. Gastroenterologists, endoscopists and thoracic surgeons, on the other hand, regard it as a frequent cause of difficulty. In our experience at the clinic, approximately 25 per cent of all esophageal hiatal hernias are asymptomatic. In another 25 per cent, it is difficult to say whether or not the symptoms of which the patient complains have any relationship to the hernia. In the remaining 50 per cent the hernia does give rise to definite clinical symptoms.

The symptoms produced by esophageal

Read at the meeting of the Medical Association of the State of Alabama, Montgomery, Alabama, April 21, 1955.

The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

hiatal hernia are dependent, in large measure, on the size of the hernia, its type, the degree of incarceration and the associated esophagitis. Although large hernias are more likely to cause symptoms than small hernias, this is not invariably true for many small hernias cause great difficulty but, because of their size, they may be overlooked as factors producing the patient's symptoms.

The type of hiatal hernia is of considerable importance, not only in the production of symptoms but also in treatment. Esophageal hiatal hernias generally may be divided into three main types (fig. 1). The first is the paraesophageal hiatal hernia

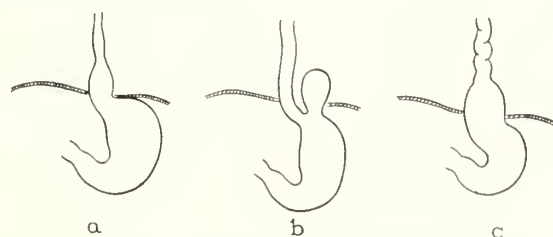


Fig. 1. Three types of esophageal hiatal hernia. a. Short esophagus with intrathoracic stomach. b. Paraesophageal hiatal hernia. c. Sliding type of hiatal hernia.

which comprises approximately 15 per cent of cases (fig. 1b). It is characterized by the fact that the esophagus is of normal length and is attached to the diaphragm with the stomach herniating up alongside the esophagus through the esophageal hiatus into the posterior mediastinum.

The second and commonest type of hiatal hernia is the sliding variety which accounts for 67 per cent of the cases (fig. 1c). In this type the esophagus is of normal length but the stomach pushes up through the hiatus, and the esophagus foreshortens by plicating on itself. Before the stomach becomes incarcerated in the hernial sac it may move back and forth through the hiatus from the abdomen into the mediastinum and vice versa. If special care is not exercised at the time of roentgenologic examination, hernias at this stage may be

easily overlooked. In addition to the stomach, other abdominal viscera such as omentum, bowel and spleen may become incorporated in the hernial sac, complicating the clinical picture.

The third type of hernia is the short esophagus with intrathoracic stomach, in which the esophagus is not long enough to reach the diaphragm and the stomach is pulled up through the hiatus to bridge the gap (fig. 1a). There are two types of short esophagus with intrathoracic stomach, the first and least common of which is the congenital short esophagus with intrathoracic stomach. In this group the esophagus has never developed to its full length and the stomach has always been partially incorporated in the mediastinum as the diaphragm in its development assumed its normal position. A patient with this type of hernia will have trouble swallowing from birth. The commoner type of short esophagus with intrathoracic stomach is the acquired type. This most frequently occurs as a result of cicatrization of the lower end of the esophagus, usually resulting from regurgitation of gastric contents into the lower portion of the esophagus. As contraction of the inflammatory process in the wall of the esophagus progresses, the stomach is gradually drawn up through the hiatus into the thorax.

A sliding type of hiatal hernia can be converted into a short-esophagus type by the cicatrization that may occur in the lower portion of the esophagus owing to incompetency of the cardia and regurgitation of gastric contents into the esophagus. Shortening of the esophagus also may take place as a result of carcinomatous infiltration in the wall of the esophagus, especially in its lower half, with secondary contracture.

When the anatomic relationship of the esophagus and stomach to the esophageal hiatus is considered it is not surprising that herniation should occur. The wonder is that it does not occur oftener. The esophagus, owing to the presence of longitudinal fibers in its wall, tends to foreshorten if not fixed at both ends. This means that there is a constant pull at both ends of its attachment. Because the esophagus is firmly anchored proximally to the pharynx and larynx, most of the pull will be exerted on the diaphragmatic esophageal membrane which holds the esophagus in place in the esophageal hiatus. The diaphragmatic

esophageal membrane, which is a rather thin sheath, arises primarily from the lower surface of the diaphragm and is attached to the lower 3 cm. of the esophagus and the upper 2 cm. of the stomach. It is composed of elastic and fibrous tissue. Both obesity and the aging process will exert a relaxing effect on such tissue. This tendency toward relaxation is further accentuated by an increase in intra-abdominal pressure, which is the handmaiden of obesity and the infirmities of age.

The symptoms produced by esophageal hiatal hernia are so variable in character that the condition has been very aptly termed by Harrington^{1,2} "the masquerader of the upper abdomen." In a study of 343 hiatal hernias on which he had operated, Harrington¹ found that a wrong diagnosis had been made on an average of three times before the correct diagnosis was established. The commonest errors in diagnosis, in order of frequency, were cholecystic disease, peptic ulcer, cardiac disease, carcinoma of the cardia and cardiospasm.

The commonest symptom associated with esophageal hiatal hernia is pain. This may vary considerably in character, location, intensity and radiation. At the onset it is usually of a mild nature, intermittent in character, and comes on while the patient is eating, or shortly after. The pain is generally situated in the epigastrium. It tends to increase in severity as incarceration and esophagitis develop. The pain tends to project straight through to the back and along both costal margins, the left side being more frequently involved than the right. It may become agonizing in character and may be referred by way of the phrenic nerve to the shoulder and down the arm. The left shoulder and arm are more frequently involved than the right. When this extension of pain occurs, the picture may be readily confused with that of angina pectoris. Since the phrenic nerve, which transmits the visceral afferent fibers via which the pain is transmitted in such cases, arises from the third, fourth and fifth cervical roots, the pain is referred down the outer aspect of the arm. In con-

1. Harrington, S. W.: Esophageal Hiatus Diaphragmatic Hernia, *Rocky Mountain M. J.* 49: 665-673 (Aug.) 1952.

2. Harrington, S. W.: Various Types of Diaphragmatic Hernia Treated Surgically, *Surg., Gynec. & Obst.* 86: 735-755 (June) 1948.

trast, the pain of angina pectoris is referred down the inner aspect of the arm. Actually, in practice it is often difficult for the patient to delineate the area of pain with certainty. It is true that the pain of hiatal hernia is not as a rule precipitated by exertion as is true in angina pectoris, and relief is not obtained as promptly with nitroglycerin as is experienced with angina pectoris. Electrocardiographic changes are not present in those cases of pain due to hernia alone. At times it is possible to distinguish between the two pains only by means of interruption of the phrenic nerve.

Gaseous eructation and heartburn with or without pain are common symptoms in hiatal hernia, occurring in one of four patients. Many patients obtain relief through the use of small doses of sodium bicarbonate or milk and, consequently, the symptoms may be misinterpreted as being due to peptic ulcer. It is not surprising that, when belching is associated with pain and vomiting, hiatal hernia should be confused with cholecystic disease. Pain, gaseous eructation and epigastric distress often are augmented when the patient lies down.

Dysphagia occurs in approximately 20 per cent of cases of esophageal hiatal hernia, and it is present much more frequently in the short-esophagus type than the other two kinds. A characteristic of this symptom is that the patient will note dysphagia at the beginning of the meal but if he can belch he usually can complete the meal without difficulty.

Bleeding is not an uncommon symptom in hiatal hernia, occurring in approximately one of five cases. It may be massive in character, but more frequently it is minimal and often it is detected only because an unexplained anemia has developed and occult blood is found in the stool. The bleeding, as a rule, results from esophagitis and ulceration either in the lower portion of the esophagus or in the herniated stomach.

The problem of diagnosis in esophageal hiatal hernia is often complicated by the fact that patients with such an abnormality are likely to have disease elsewhere in the abdominal cavity.

Although the diagnosis of esophageal hiatal hernia can be made in most cases by roentgenographic examination alone, at times difficulty may be encountered in this respect. When question arises, esophagos-

copy may be found of value in arriving at the diagnosis. Esophagoscopy is also of value in determining the type of hernia, and this is especially important if surgical measures are to be considered. It is advisable that all patients with esophageal hiatal hernia who have symptoms as a result of the hernia undergo esophagoscopy examination to determine the presence or absence of esophagitis, ulceration or stricture—factors which are of major importance in determining the advisability of operation. Esophagoscopy is also of value in ruling out carcinoma, benign tumor or an impacted foreign body which may be associated with the hernia and otherwise overlooked.

The treatment of esophageal hiatal hernia is dependent in large measure on the symptoms it produces, the type of hernia and the presence or absence of esophagitis, ulceration and stricture. If the patient has no symptoms referable to the hernia, treatment is not indicated, although if the patient is overweight he should be advised to reduce his weight in order to avoid future difficulty. In all other cases, except for strangulation, uncontrolled bleeding and pain, it is generally advisable that the patient be given an adequate trial of medical management before considering surgical interference.

Approximately half of all patients with hiatal hernia will be overweight, and special attention should be directed toward weight reduction. If esophagitis and ulceration are evident, the diet should be bland in character and fortified with the use of antacids as employed in the treatment of peptic ulcer. The eating of large meals, especially before retiring, is to be avoided. The patient should be instructed to sleep with the head of the bed elevated at least 10 to 12 inches, so as to prevent regurgitation of gastric contents into the esophagus during sleep. The wearing of tight garments about the abdomen, such as girdles, abdominal supports and belts, should be avoided to prevent increasing the intra-abdominal pressure. The use of cortisone has been recommended by some physicians in the treatment of hiatal hernia with associated ulceration and stricture. Because of the danger of bleeding and perforation we have not advocated the use of cortisone in treatment in these conditions.

In approximately 15 per cent of the cases

in which medical treatment is used the hiatal hernia will completely reduce itself, but of even greater importance is the fact that in more than 65 per cent of cases the patient will be completely relieved of clinical symptoms. In those cases in which the hiatal hernia continues to cause clinical symptoms and to increase in size in spite of weight reduction and medical management, and especially if there is evidence of esophagitis and ulceration, surgical measures to reduce the hernia are indicated.

The type of surgery to be employed in any given case will depend on the kind of hernia that is present. The paraesophageal and sliding types of hiatal hernia are nicely handled by repair of the hiatus and reduction of the hernia by either an abdominal or a transthoracic approach. Some of the cases of short esophagus with intrathoracic stomach, if the esophagus is not too short and if stricture at the esophagogastric juncture is not of a high degree, can be dealt with in a similar manner by a shift of the hiatus to a higher level on the diaphragm. In those instances in which the esophagus has been shortened to a marked degree and considerable stricturing has taken place, this method of treatment is not adequate. In cases of this type the patient often may obtain considerable benefit by occasional dilatation of the stricture over a previously swallowed silk thread, along with other forms of medical management. Apparently the stagnation of food in the esophagus tends to aggravate the esophagitis, and dilatation of the stricture permits better drainage of the esophagus and a subsidence of the esophagitis. We have found that dilatation up to the size of a 50 F. sound seems to offer the most satisfactory results.

Resection of the lower end of the esophagus and partial gastrectomy, as advocated by Wangensteen and Levin,³ and the operation suggested by Allison⁴ consisting of an esophagojejunostomy bypassing the stomach, are the two operative procedures most frequently employed in surgical treatment of short esophagus with intrathoracic stomach. Although these procedures have been

found of value, they have not entirely overcome the problem of regurgitant esophagitis plus the lack of an adequate stomach pouch. At best they are but procedures that are stepping-stones to the development of surgical measures that must eventually be devised to restore the sphincter mechanism of the cardia. Operation on the cardia is at best always a hazardous procedure due to the danger of regurgitant esophagitis.

ACHALASIA OF THE ESOPHAGUS

In the past few years there has been considerable controversy as to the most satisfactory method of treating patients suffering from achalasia of the esophagus. The past 5 years have witnessed an especially enthusiastic attack on the problem by surgical methods.

Before discussing the problem of treatment it is important to define what we mean by the term "achalasia." Achalasia, or "cardiospasm," a term by which it is probably better known, is a diffuse narrowing of the lower end of the esophagus of



Fig. 2. Achalasia of the esophagus; roentgenologic appearance.

3. Wangensteen, O. H., and Levin, N. L.: Gastric Resection for Esophagitis and Stricture of Acid-Peptic Origin, Surg., Gynec. & Obst. 88: 560-570 (May) 1949.

4. Allison, P. R.: Obstruction of Gastro-esophageal Junction, Lancet 2: 91-94 (July 16) 1949.

nonorganic nature, with dilatation of the esophagus proximal to the site of obstruction, hypertrophy of the muscular wall of the esophagus and destruction of the Auer-

bach plexus in the wall of the esophagus (fig. 2).

The diagnosis of achalasia of the esophagus can be made with ease in most cases from the clinical history and the rather characteristic roentgenologic appearance. In those instances in which question arises concerning the accuracy of the diagnosis the following procedures will be found of value:

Esophagoscopy is always advisable when diagnosis is doubtful. Carcinoma, especially scirrhus carcinoma of the cardiac end of the stomach, may be confused with achalasia and it is important, if the diagnosis is in question, that smears and specimens for biopsy be removed for microscopic and cytologic study. Negative results for biopsy or cytologic examination do not necessarily rule out carcinoma. Carcinoma of the stomach is especially likely to infiltrate underneath the mucosa of the lower end of the esophagus, producing obstruction but not perforating the mucous membrane so that satisfactory specimens for biopsy or material for cytologic study may be difficult to obtain. Esophagoscopy is also of value in the diagnosis of esophageal tumors, hiatal hernia, varices and foreign bodies, which can simulate the roentgenologic appearance of achalasia.

One of the most valuable aids in the diagnosis of achalasia of the esophagus is the passage of a blunt olive over a previously swallowed silk thread. In achalasia, the obstructed portion is soft and pliable, and the olive will pass into the stomach easily on gentle pressure. When snubbing of the olive or undue pressure is necessary to overcome the resistance of the cardia, the possibility of carcinoma must always be seriously entertained. Smears taken from the olive after its passage into the stomach, and studied cytologically, may lead to the establishment of the correct diagnosis.

In the normal esophagus, the pressure after deglutition increases as the peristaltic wave passes down the gullet (fig. 3). These changes can be readily demonstrated if a recording balloon or gauge is introduced into the esophagus and pressure changes noted on a kymograph. In achalasia such pressure changes do not occur (fig. 4).

Kramer and Ingelfinger⁵ also have called attention to the fact that if 10 minims of mecholyl are injected intramuscularly into

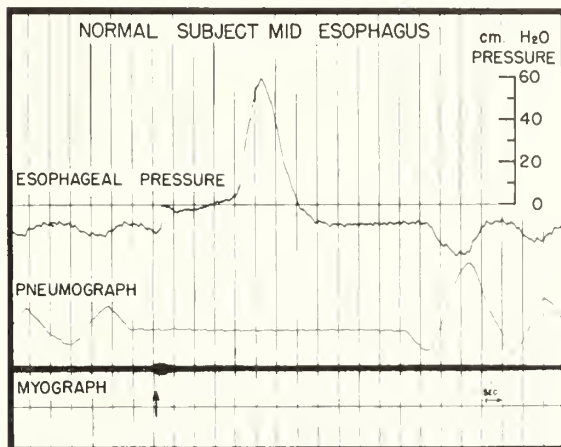


Fig. 3. Esophageal pressure rise with deglutition in normal person.

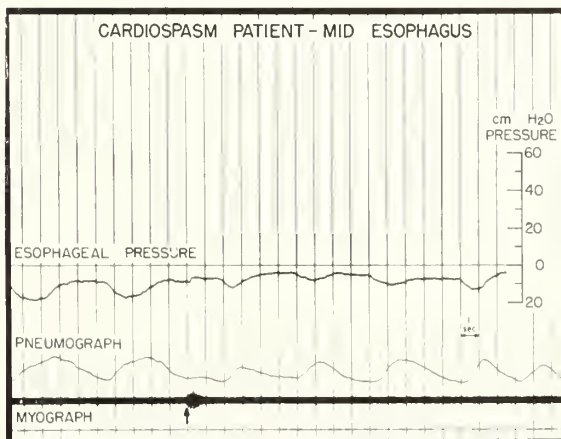


Fig. 4. Absence of increase in esophageal pressure with deglutition in achalasia.

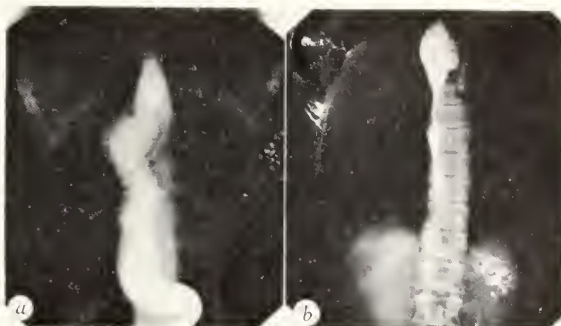


Fig. 5 a and b. Contraction of esophagus after intramuscular injection of 10 mg. of mecholyl.

a patient with achalasia, the esophagus is stimulated into a tetanic contraction (fig. 5a and b). This contraction is accompanied

5. Kramer, Philip, and Ingelfinger, F. J.: Esophageal Sensitivity to Mecholyl in Cardiospasm, *Gastroenterology* 19: 242-251 (Oct.) 1951.

invariably by severe substernal pain which closely simulates that associated with angina pectoris. These reactions are seldom encountered in any condition other than achalasia and, therefore, these two tests are of decided value in the differential diagnosis of obscure cases of achalasia.

The treatment of achalasia of the esophagus can be divided primarily into two types: (1) dilatation of the cardia by means of various types of dilators such as mercury, air and hydrostatic, and (2) surgical intervention. What are the results that may be anticipated in the treatment of achalasia by these two methods?

Our experience at the clinic in the treatment of achalasia of the esophagus by means of the Plummer hydrostatic dilator is that approximately 70 per cent of the patients will be completely relieved of their difficulty. Twenty per cent will be improved but will require repeated dilations, and approximately 10 per cent are not helped by this method of treatment. It is important to know the risk involved in treating achalasia by this method. In our experience this is less than 1 per cent. One might well ask, if operation is required in certain cases of achalasia, why not use it in all cases? The answer lies in the danger of esophagitis developing postoperatively.

The surgical procedures most widely used in the treatment of achalasia may be divided into two categories. The first, and the one that was formerly used most extensively, is some variety of procedure to increase the size of the esophagogastric junction or to construct a new opening between the esophagus and the stomach. In approximately 70 per cent of patients operated on by this method satisfactory results might be anticipated. In the remaining cases regurgitant esophagitis with ulceration, bleeding and recurrent dysphagia became a major problem and the patient was often in greater distress and difficulty after operation than he was before. It was obvious that a method of operation that would interfere as little as possible with the sphincterlike action at the cardia, so as to prevent regurgitation of gastric contents into the esophagus and permit the free passage of gastric contents out of the stomach, was the procedure of choice. The Heller type of operation, in which the circular muscles of the cardia were cut, seemed to meet most of these requirements.

In most respects it has given the most satisfactory results in the surgical treatment of achalasia. The original reports on the results of surgical treatment of achalasia of the esophagus by the Heller procedure might lead to the conclusion that satisfactory results could be anticipated in all cases. Experience and time have demonstrated that while it does afford highly satisfactory results in most cases, recurrence of dysphagia and regurgitant esophagitis can and does occur. Because of the high degree of distress that accompanies regurgitant esophagitis and the difficulty that is experienced in dealing with the problem once it is established, it would seem advisable for the present to limit surgical treatment for achalasia to those patients who do not respond to dilatation, at least until sufficient time has elapsed to permit a final evaluation of the risks and dangers involved in surgical treatment for this condition.

Information Requested on Insecticide Poisonings—A special grant has been made to the Department of Pathology, Louisiana State University School of Medicine to investigate the mechanism of action of anticholinesterase insecticides and the therapy of poisoning resulting from excessive exposure. The widespread use of Parathion and TEPP (tetraethyl pyrophosphate) in agriculture, industry and the home is causing an increased number of accidental exposures. Interest in the subject encompasses clinical observations as well as studies on fatal cases at autopsy.

If a case of poisoning by any of the anticholinesterase insecticides comes to the attention of any physician, it would be appreciated greatly if the Department could obtain information on the case. Because of the rarity of this condition and certain unusual aspects of therapy, the Department of Pathology is prepared, when requested, to give recommendations as to treatment in a surviving patient. It is also prepared to send an investigative team at its expense. Telephone calls to report cases and request information will be accepted at any time, day or night, to Dr. Stanley H. Durlacher, New Orleans, Franklin 4141, collect.

NEXT ANNUAL MEETING

BIRMINGHAM

APRIL 19, 20, 21, 1956

Scientists Patiently Seek Elusive Cause of Multiple Sclerosis—The cause of multiple sclerosis, disease of young adults, is as elusive now as it was in 1835 when the disease was first observed and described, although several tantalizing clues are presently being explored, it was revealed at the Eighteenth Session of the Medical Advisory Board Meeting of the National Multiple Sclerosis Society.

Fifteen progress reports were delivered by distinguished scientists in the field of multiple sclerosis. Invited guests included Dr. Douglas McAlpine of the Middlesex Hospital, London, England, and Dr. R. S. Allison of the Royal Victoria Hospital, Belfast, Ireland, who spoke on the incidence of multiple sclerosis in their respective countries, and made brief statements on the scope of multiple sclerosis research projects there.

Dr. Albert Schatz, co-discoverer of streptomycin, and Director of Research at the National Agricultural College, Bucks County, Pa., reported on his research project, sponsored by the Society. He expects to isolate soon chemical products obtained from soil microbes which may prove to be capable of inhibiting demyelination (deterioration of the nerve pathway sheaths).

Dr. Schatz acknowledged the excellent cooperation he has received from other research investigators sponsored by the Society. He mentioned that, in particular, Dr. Harry M. Zimmerman and his associates at the Montefiore Hospital, in New York, had been able to place at his disposal certain laboratory techniques which might otherwise have been unavailable. Dr. Zimmerman himself submitted a progress report on the Central Pathology Registry in Multiple Sclerosis, the only one of its kind in the world.

Experiments with vitamin B₁₂, as part of a more general study of the cerebrospinal fluid in multiple sclerosis, were reported by Dr. Harry Sobotka, Director of the Department of Chemistry, Mount Sinai Hospital, New York City. Dr. Sobotka is searching for a possible connection between disturbances of the vitamin distribution in normal persons and those who have neurological disease. Dr. Sobotka's group of researchers are seeking to determine what role, if any, vitamins play in the course of multiple sclerosis.

Dr. Roland P. Mackay, Professor of Neurology of the University of Illinois, reported on the genetic study he is directing. Although it is estimated there are some 350 sets of identical twins in this country, with one twin of each pair suffering from multiple sclerosis, only 36 sets have as yet been located. Dr. Mackay hopes to locate the others as well as fraternal twins, one of which has multiple sclerosis. Studies of such twins may be instrumental in helping advance present knowledge of the genetic and environmental factors in multiple sclerosis.

Drs. Gilbert S. Gordan and John E. Adams of the University of California Medical School submitted a progress report on their studies in amidation (metabolism) of glutamic acid in both multiple sclerosis and normal persons. Such defects in amidation in patients with acute multiple sclerosis were to some extent controlled by intravenous sodium succinate; increased glucose intake is associated with increased metabolism,

by the brain, of glucose. Drs. Gordan and Adams pointed out, however, that their investigations required extended verification, and the practical application of these observations to patients is not yet understood and is to be the object of further study.

Reports of other studies in multiple sclerosis, supported by grants-in-aid of the National Multiple Sclerosis Society, were made, including one seeking a specific diagnostic test for the disease; biochemical and blood analyses of multiple sclerosis patients and studies with test animals.

Mental Outlook Important in Treating Incurable Cancer—People with incurable cancer should be informed of the seriousness of their condition but not its hopelessness, according to the Veterans Administration Department of Medicine and Surgery.

Loss of hope by the patient is "possibly the most important single factor determining the total discomfort and unpleasantness experienced" in incurable cancer, the Federal agency notes in its Technical Bulletin (10-107, 1955). Such cases can benefit considerably if doctors, who need not be psychiatrists, do their utmost to develop a hopeful mental outlook. In this connection, the publication cites as a "commonly recognized fact" that new treatment of any sort "will usually result in a period of subjective improvement which may be striking in degree."

"This is undoubtedly due to the psychological impact of the appearance in the attending physician of interest, consideration and attention to the patient's problems."

Cautioning against extreme attitudes, the VA advises doctors to avoid "bubbling optimism" as well as telling a patient "I can do nothing for you."

Relief of pain is also a fundamental aspect of treatment. While few specific chemotherapeutic agents are available today, serious and protracted pain can be prevented by local surgery, radiation and analgesic drugs.

When pain-killing drugs are indicated, a very potent narcotic should not be given if "pain can be adequately controlled by a simple analgesic such as aspirin." Doctors should always try to control pain "with the safest agent possible and should continue to use that agent and related agents as long as they are effective," the VA bulletin states.

In extremely depressed patients, the use of certain hormones has produced a sharp increase in appetite and sense of well-being.

Aspirin Preferred in Rheumatoid Arthritis—Aspirin is the analgesic of choice in treating rheumatoid arthritis and, combined with rest and physical therapy, still constitutes the basic approach in managing the condition, according to a panel discussion reported in *California Medicine* (82: 367, 1955).

The panel consisted of Drs. Ephraim P. Engleman, Howard J. Weinberger, Carlos F. Sacasa, Nathan E. Headley, Roland Davison, Stacy R. Mettier and Frederic W. Rhinelander.

Aspirin not only has proven analgesic activity in rheumatoid arthritis but "has a definite effect on the connective tissues involved in the disease," Dr. Davison stated.

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COBALT AND IRON IN ANEMIA OF PREMATURITY

According to Coles and James (Journal Lancet 75: 79, March 1955), the pathogenesis of the anemia of prematurity is still somewhat obscure, but the blood picture closely resembles that of anemia associated with infection. In each case the anemia is normocytic and normochromic with a low reticulocyte count, and this similarity between the anemia of prematurity and that of sepsis prompted an investigation of the effect of cobalt in premature infants.

The study included 126 infants who were divided into 4 groups. Of these, 83 were followed for six months or longer. Group 1 acted as controls. Group 2 received 10 mg. of cobalt sulfate daily from one to twelve days. Group 3 received 20 mg. of cobalt sulfate daily from four to eight weeks. Group 4 received 20 mg. of cobalt sulfate and 4.5 gr. of ferrous sulfate daily from four to eight weeks.

Infants in Groups 3 and 4 combined had a significantly higher average hemoglobin content and red cell count at each examination from two months onward than Groups 1 and 2 combined. Infants in Group 4 had significantly higher hemoglobin contents from four to six months than Group 3, also receiving cobalt but no iron. At this stage iron deficiency becomes important in the development of anemia in premature infants, and these results were to be expected. No case receiving iron and cobalt from four to eight weeks required any additional therapy, but all cases that did were from the control group.

Cobalt appears to be of value in the prevention of early anemia in premature infants, and if iron is administered simultaneously, the risk of an iron deficiency anemia developing after the fourth month is considerably reduced. Cobalt has no toxic effects and no unfavorable influence on the weight gain in the dosage employed.

The mode of action is uncertain, but two possibilities seem likely: (1) a direct action on the erythropoietic tissue in the marrow; or (2) a possible catalytic action enabling available iron to be more readily utilized for hemoglobin synthesis.



MRS. WILLIAM G. THUSS
Birmingham
President of the Woman's Auxiliary
1955-1956

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

EMERGENCY CALL SYSTEM

W. A. Dozier, Jr.

Director of Public Relations

In the past few years the profession has heard much about emergency call systems. County Medical Societies have been admonished to set up such a system if one were not already in existence. It was found very often in Alabama that there already was an informal plan in operation, but sometimes a society felt it was too small to handle an emergency call system properly. Even when a plan existed the public too often did not know of it.

The following report from Pennsylvania can be of value to all societies. You are requested to read it, compare what was done in all its phases to what your society has done, reevaluate your plan, and make any needed additions. If you don't have a plan, consider setting up one.

The following excerpts are taken from an article in the *Public Relations Reporter* of the Medical Society of the State of Pennsylvania entitled "A Case Study of the Wyoming County Emergency Call System."

"Wyoming County is a relatively small county having an area of 396 square miles with a population of about 20,000 persons living mostly in the rural areas. There are 9 physicians now in active practice in Wyoming County. The largest town is Tunkhannock, with a population of slightly over 2,000 persons. Four physicians practice there. The Tyler Memorial Hospital located in Meshoppen in the northwestern section of the county has a staff of nine doctors. Meshoppen, with a population of about 500 persons, is apparently becoming the center of medical activity in the county.

"Here is the way the Emergency Call System works: The hospital has approximately forty beds and a doctor is always on call assigned to a weekly tour of duty. The public is advised via newspaper ads how to use the emergency call system. . . . At the same time the first ad appeared in the local paper, the editors of The Wyoming

County News and the Tunkhannock Republican printed articles about the formation of the call system. . . .

"Wyoming County Medical Society has very wisely decided that a continuing program of publicity would be necessary to keep the public informed about the call system. As a result, we learned that before each holiday the society places an ad in the local papers. This timing is important because the Wyoming County area has a large influx of tourists during holidays who may need emergency service. In addition to the paid advertisements the county society has several types of printed posters which are placed in stores, theatres, and other public places.

"In addition to this formal emergency call plan, county society members have established working arrangements among themselves to cover the outlying districts. For example, a doctor located in Noxen reciprocates with the doctors in Dallas to cover their patients when they are out of town and they in turn cover his patients.

"The State Police barracks in Tunkhannock is supplied with the name of the 'doctor on call' each week. Thus, in an emergency they can contact the 'doctor on call' directly.

"The superintendent of the Tyler Memorial Hospital has co-operated wholeheartedly with the county society and it is the society's intention to build up the hospital as the center of medical service to the citizens of Wyoming County. The hospital superintendent sets up the rotation of 11 doctors on call and they are reminded several days in advance of their tour of duty.

"A pharmacist is always available in the county and, although the hospital has no ambulance service, three funeral directors co-operate to provide the necessary service.

"The most interesting fact about the entire call plan is that it has actually been, for the most part, in operation for the past six years, but it is only now being publicized by the county medical society through advertising and placement of stories in the local newspapers. The service of the coun-

ty medical society in making this information available to the public and providing advice to those seeking the services of a physician has paid off in good public relations. The Wyoming County Medical Society is to be congratulated for the service they are providing and from a PR view-

point they are beginning to reap the benefits of a satisfied public because they have taken the steps necessary to show the public the efforts they are making to have adequate and complete medical service available to all those who may need it."

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

FOOD FADS A WASTE OF TIME AND MONEY

Contributed by
Nadine Pitts, Director
Division of
Public Health Education

How many times have you cut short a salesman's talk with "Sorry, but—"? Perhaps you will listen patiently while he extols his wares, but your final answer is often "No," if you have no real need for the products he is selling. And even when we do indulge ourselves to the extent of buying a new-fangled gadget or piece of equipment, we often do so with the full awareness that the old-style model would have continued to do at least an adequate job during its life span. Thus, while most of us know whether our broom "sweeps clean," we might not know the nutrients we take into our bodies by eating a given size serving of a particular type of food. Experts in the field of nutrition assure us that we can provide our bodies with adequate nutrients with only a working knowledge of the basic seven food groups—the standard of good nutrition discussed in a recent paper in this series. However, advances in the nutrition field continue to be made and in our efforts to keep abreast of this newer knowledge, we frequently find ourselves the staunch advocates and practitioners not of good nutrition but rather of food fads and fancies.

Agriculturists and chemists assure us that the food supply in the United States today is the best that we have ever had. Furthermore, they point out, there is a high standard of protection for our food supplies. Despite this, however, they estimate that the dietary habits of approximately ten million persons in the country are being in-

fluenced by nutrition quacks who peddle food fads and fancies by way of radio, magazine and newspaper articles. And there can be no reasonable doubt that a number of Alabamians are victims of some of this high-pressure selling.

Why, you may ask, are these fads and fancies undesirable? First of all, they are expensive. Take wheat germ, for example. You may have heard or seen this substance advertised. There is no denying that wheat germ is nutritious. At the same time, however, there are many foods which cost less and are of equal nutritional value. Still another so-called food supplement in popular vogue is a case in point. It, too, is expensive when compared with the prices of foods which contain much the same nutrients.

A second reason why food fads are undesirable is that they undermine sound nutrition knowledge and practice. The super-salesmen of food quackery are hard to combat. Their claims, no matter how unethical, make a good impression on many persons. In fact, vigorous educational campaigns are frequently needed to do away with these erroneous impressions and to place food fads in proper perspective. Finally, many food fads are offered to an unsuspecting public as both the means of prevention and cure of some diseases. Thus, some food supplements take the place of *bona fide* medical treatment in the eyes of some persons. And in just this way and to this extent, they are harmful in that they result in delay in seeking proper treatment. In some cases, seeking proper treatment is postponed until it is too late to be of any value.

An editorial in a recent issue of the Journal of the American Medical Association lists what it considers three bars to good nutrition. Perhaps the chief bar is inadequate funds, especially among the very low

income groups. The problem of this group is very real. However, some among this group could, if sound nutritional knowledge were made practical for them, go a long way toward providing a reasonably balanced diet for themselves and their families. At the same time, it is certainly true that inadequate funds, in some cases, has been used as an excuse for inadequate foods. The two other bars to good nutrition listed by the editorial are a lack of practical nutrition knowledge and the influence of superstitions, both ancient and modern.

It is when the nutrition quacks gain support among this low income group—and even others with a slightly higher income—that harm is caused. It is not a comfort to know that some persons perhaps daily are convinced by the food faddist's often unsound arguments. One such argument is that vegetables from an unknown source were probably raised on soil depleted of necessary minerals and vitamins, and are therefore nutritionally inferior, if not valueless. That editorial we mentioned earlier points out that a soil so meager or poor would be negligible as a source of food supplies. However, many individuals, on the basis of just such arguments, buy and take food supplements regularly. And all the while, they continue eating some of the criticized vegetables. In this way, doses of food supplements may be duplicating nutrients already consumed in food.

It should be said here that our criticism of food fads and faddists does not refer to the legitimate and beneficial practices which are based on sound nutrition knowledge. The doctor, by means of tests, is able to determine if an individual is deficient in one or several vitamins and minerals. Only after a careful diagnosis, he will prescribe the specific nutrient or nutrients the individual needs. Thus the doctor's beneficial practice differs from the quack's "prescription" in an all-important respect: the doctor's prescription is specific for a specific need, and little if any duplication of nutrients is involved. The supersalesman's food supplement, on the other hand, is usually the same for all individuals, without regard for the person's specific requirements. The simple fact is that the salesman is not qualified and therefore unable to make an accurate diagnosis of an individual's specific needs.

An article in a recent issue of *Nutrition*

Reviews (October 1954) tells us that the old-time medicine man, or the man who sold cure-alls on the streets, was actually yesterday's nutrition quack. The medicine man "... sold his cure-all, youth-restoring patent medicines to any small groups which he could attract on a street corner, in a vacant lot, or at picnics and fairs. However, with improvements in communication, an informed public soon became conscious of the complete ineffectiveness of his products. Instead of disappearing with the changing times and conditions, the medicine man became 'a food expert,' dealing in health foods and diet supplements instead of patent medicines and using every form of modern advertising and means of communication ... Whether the 'expert' is a lecturer-author, ... crusader, writer of sensational articles and books, or a high pressure salesman appearing on radio and television, fundamentally the food faddist is a fluent speaker or writer. He is willing to make unrestrained and fantastic claims as to the value of his products or theories, disagreeing with established information and condemning generally recognized and authoritative scientific organizations, institutions and regulatory agencies and he always has something to sell."

The food fad advocate becomes particularly vicious when he urges the avoidance of certain nutritious foods because they are believed by him to be poisonous, indigestible, allergenic, cancer-producing or otherwise harmful. That editorial we referred to above points to the advocacy of total abstinence from meat and meat products as another example. The food faddists also stress the avoidance of certain food combinations, although no foods are known to be harmful as a result of being eaten together. This perhaps has its roots in such ancient superstitions as the avoidance of a combination of fish and milk, although no harm from this combination has ever been proven.

The faddists have taken advantage of the widespread interest today in the problem of overweight, or obesity, and they have exploited the fear of overweight and its effects. Of course, one answer to the overweight problem is a low calorie intake, although no very low calorie diet should be undertaken without medical supervision. However, the nutrition quacks have found that the promotion of reducing aids and a variety of diets is a most profitable and ac-

tive operation. Their promises usually are based on a way to reduce without dieting, obviously playing upon wishful thinking that weight reduction can be achieved without a reduction in the caloric value of the food eaten below the calories expended. Their methods certainly appear more attractive and easier than dieting to some persons. However, none of the methods is likely to be both effective and safe. "Dietetic foods" or diet supplements cannot replace a sensible, balanced low calorie diet and, with such a diet, they are superfluous. Some of them are designed to spoil the appetite, but they seldom achieve success. And others, among them the roughage, low calorie foods, may do considerable harm to sensitive digestive tracts. One of the bulk-producing preparations is a tablet, which is claimed to swell up and depress hunger contractions of the stomach when swallowed with water, so that less food is eaten. Perhaps this is possible in some persons, but such a process could not influence too much the nervous or environmental tensions that are often responsible for overeating. The bulk-producing preparations certainly will not diminish the desire to eat, or appetite for food, and appetite, not hunger, is responsible for overeating.

That Nutrition Reviews article we mentioned earlier estimates that approximately one-half billion dollars per year is being spent for "health foods," "health aids" and "diet supplements." And this huge amount of money can be considered a waste, for either no real need for the products has been demonstrated, or else they are unnecessary for the purchaser.

There are people and organizations who can lend a helping hand by providing sound nutrition knowledge. The doctor or reputable nutritionist, not the nutrition quack or the food faddist, is the person best qualified to help you if there is reason to believe your diet is not providing the proper nutrients. The doctor, after diagnosis, will prescribe the specific vitamins and minerals you need, and not an all-purpose supplement, which may over-duplicate some nutrients you are already eating. Similarly, an overweight problem can best be handled with expert advice for a satisfactory diet on a low calorie basis.

The State Health Department, as well as the Agriculture Department, are other sources of sound information regarding nutrition. In addition, faculties and re-

search staffs of colleges and universities spend much time seeking facts on nutrition. And they are eager to disseminate the information at their disposal to the public.

We can be sure that the food faddists will continue to make the most of such problems as overweight, as well as a lack of sound nutrition knowledge. They will not disappear of their own accord. The food fad crusaders will fail to achieve their goal, however, when an informed public learns to accept no substitute for the standard of good nutrition, the basic food groups—milk, green vegetables, lean meats, citrus and other fruits and enriched grain foods.

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1955

	Feb.	Mar.	E. E.* Mar.
Typhoid and paratyphoid fever	1	4	4
Undulant fever	1	0	4
Meningitis	17	15	17
Scarlet fever	84	41	44
Whooping cough	96	128	82
Diphtheria	11	5	20
Tetanus	1	1	2
Tuberculosis	197	160	226
Tularemia	1	2	2
Amebic dysentery	4	2	2
Malaria	0	0	2
Influenza	4660	1342	2764
Smallpox	0	0	0
Measles	252	461	485
Poliomyelitis	4	2	4
Encephalitis	0	3	1
Chickenpox	350	453	395
Typhus fever	1	0	5
Mumps	346	189	192
Cancer	371	510	349
Pellagra	0	0	2
Pneumonia	453	278	393
Syphilis	151	280	487
Chancroid	1	4	13
Gonorrhea	326	316	424
Rabies—Human cases	0	0	0
Positive animal heads	35	40	0

	Mar.	Apr.	E. E.* Apr.
Typhoid and paratyphoid fever	4	3	5
Undulant fever	0	1	2
Meningitis	15	8	11
Scarlet fever	41	49	33
Whooping cough	128	165	93
Diphtheria	5	3	16
Tetanus	1	1	2
Tuberculosis	160	249	228
Tularemia	2	0	2
Amebic dysentery	2	2	5
Malaria	0	0	3
Influenza	1342	366	981
Smallpox	0	0	0
Measles	461	500	834
Poliomyelitis	2	2	3
Encephalitis	3	3	1
Chickenpox	453	359	307
Typhus fever	0	2	8
Mumps	189	328	156
Cancer	510	487	338
Pellagra	0	1	2
Pneumonia	278	271	318
Syphilis	280	174	800
Chancroid	4	4	13
Gonorrhea	316	452	441
Rabies—Human cases	0	0	0
Positive animal heads	40	57	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR 1954 AND COMPARISONS

	NUMBER RECORDED			RATES*		
	1954 (Prov.)	1953 Final	1948-1952 (Average)	1954 (Prov.)	1953 Final	1948-1952 (Average)
Total live births	81827	82507	83467	25.5	26.0	27.2
Total stillbirths	1882	1933	2212	22.5	22.9	25.8
Deaths, stillbirths excluded	25982	26885	26744	8.1	8.5	8.7
Infant deaths—						
under one year	2733	2794	3230	33.4	33.9	38.7
under one month	1893	1945	2122	23.1	23.6	26.5
Causes of Death						
Tuberculosis, 001-019	415	468	819	13.0	14.8	26.7
Syphilis, 020-029	97	106	182	3.0	3.3	5.9
Typhoid and paratyphoid, 040-041		1	3		**	0.1
Dysentery, 045-048	22	28	31	0.7	0.9	1.0
Scarlet fever, 050	1	2	1		0.1	**
Diphtheria, 055	12	11	26	0.4	0.3	0.8
Whooping cough, 056	11	4	40	0.3	0.1	1.3
Meningococcal infections, 057	29	48	27	0.9	1.5	0.9
Poliomyelitis, 080-081	30	26	24	0.9	0.8	0.8
Encephalitis, 082-083	4	5	7	0.1	0.2	0.2
Measles, 085	19	4	28	0.6	0.1	0.9
Typhus fever 100-108	1		4		**	0.1
Malaria, 110-117		1	10		**	0.3
Other infectious and parasitic diseases	48	61	75	1.5	1.9	2.4
Malignant neoplasms, 140-205	3125	3083	2834	97.5	97.2	92.3
Diabetes mellitus, 260	296	344	332	9.2	10.8	10.8
Pellagra, 281	25	21	41	0.8	0.7	1.3
Vascular lesions of central nervous system, 330-334	3416	3401	3068	106.6	107.3	100.0
Other diseases of nervous system and organs of special sense, 340-398	291	270	301	9.1	8.5	9.8
Rheumatic fever, 400-402	59	45	43	1.8	1.4	1.4
Diseases of the heart, 410-434	6409	6288	7733	200.0	198.3	252.0
Hypertension with heart disease, 440-443	1799	1961		56.1	61.8	
Diseases of the arteries, 450-456	482	479	344	15.0	15.1	11.2
Other diseases of the circulatory system, 444-447, 460-468	383	428	372	12.0	13.5	12.1
Influenza, 480-483	178	392	258	5.6	12.4	8.4
Pneumonia, 490-493	805	947	1049	25.1	29.8	34.2
Bronchitis, 500-502	45	47	49	1.4	1.5	1.6
Other respiratory diseases, 470-475, 510-527	195	181	173	6.1	5.7	5.6
Appendicitis, 550-553	42	54	66	1.3	1.7	2.2
Intestinal obstruction and hernia, 560-561, 570	158	133	166	4.9	4.2	5.4
Gastro-enteritis and colitis (under 2), 571.0, 764	132	137	173	4.1	4.3	5.6
Cirrhosis of liver, 581	162	139	152	5.1	4.4	5.0
Other diseases of digestive system, 530-549, 571.1, 572-580, 582-587	236	385	360	7.4	12.1	11.7
Diseases of pregnancy and childbirth, 640-689	108	118	156	12.9	14.0	18.2
Sepsis of pregnancy and childbirth, 640-641, 645.1, 651, 681, 682, 684	21	21	33	2.5	2.5	3.9
Congenital malformations, 750-759	349	367	335	4.3	4.4	4.0
Accidental deaths, total, 800-962	1836	1859	1872	57.3	58.6	61.0
Motor vehicle accidents, 810-835, 960	806	867	795	25.2	27.3	25.9
All other defined causes	3705	3887	4251	115.6	134.1	138.5
Ill defined and unknown causes, 780-793, 795	1057	1154	1339	33.0	36.4	43.6

*Rates: Birth and death—per 1,000 population;

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

February 1955

Examinations for diphtheria bacilli and Vincent's	188
Agglutination tests	602
Typhoid cultures (blood, feces and urine)	613
Brucella cultures	2
Examinations for malaria	71
Examinations for intestinal parasites	3,174
Serologic tests for syphilis (blood and spinal fluid)	34,474
Darkfield examinations	3
Examinations for gonococci	1,368
Examinations for tubercle bacilli	2,866
Examinations for Negri bodies	118
Water examinations	1,420
Milk and dairy products examinations	4,864
Miscellaneous examinations	687
Total	50,450

March 1955

Examinations for diphtheria bacilli and Vincent's	105
Agglutination tests	729
Typhoid cultures (blood, feces and urine)	699
Brucella cultures	9
Examinations for malaria	67
Examinations for intestinal parasites	3,745
Serologic tests for syphilis (blood and spinal fluid)	26,382
Darkfield examinations	1
Examinations for gonococci	1,618
Examinations for tubercle bacilli	3,593
Examinations for Negri bodies	141
Water examinations	1,715
Milk and dairy products examinations	5,265
Miscellaneous examinations	1,392
Total	45,461

April 1955

Examinations for diphtheria bacilli and Vincent's	78
Agglutination tests	759
Typhoid cultures (blood, feces and urine)	662
Brucella cultures	10
Examinations for malaria	75
Serologic tests for syphilis (blood and spinal fluid)	20,704
Examinations for intestinal parasites	3,070
Darkfield examinations	7
Examinations for gonococci	1,344
Examinations for tubercle bacilli	3,257
Examinations for Negri bodies	115
Water examinations	1,627
Milk and dairy products examinations	5,125
Miscellaneous examinations	1,364
Total	39,197

Infant deaths—per 1,000 live births; Stillbirths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

**Rate less than 0.05.

BOOK ABSTRACTS AND REVIEWS

Current Therapy. By 295 American authorities selected by a Board of 12 Consulting Editors. Edited by Howard F. Conn, M. D. Cloth. Price, \$11.00. Pp. 685. Philadelphia and London: W. B. Saunders Company, 1955.

For the seventh consecutive year, Dr. Howard F. Conn and his large group of associate editors have published this annual volume dealing with current therapy. Again, in this edition the editors have added many new, or revised, articles to their volume in their constant effort to make newer forms of therapy readily accessible to the average practicing physician. While giving proper attention to the new drugs, the editors are well aware that "newness" is not the only standard by which the effectiveness of a drug or program of treatment can be gauged. Therefore, their discussions of new drugs and methods are balanced by adequate discussions of the use of established methods and agents regardless of their time of origin.

As in past years, there are many instances in which more than one method of treatment is given for a specific disease. This usually occurs where there are widely differing views of the proper therapeutic approach to any disease or where there may be widely different conceptions of the disease itself. In all such instances the views expressed are those of widely experienced authorities rather than the views of the editorial board itself.

Each succeeding year thus far has added to the reputation of this work and extended the usefulness of this volume for those who wish a handy reference of current therapy.

J. M. Barnes, M. D.

Standard Values in Nutrition and Metabolism. Edited by Errett C. Albritton, M. D., George Washington University. Prepared under the Direction of the Committee on the Handbook of Biological Data, American Institute of Biological Sciences, National Academy of Sciences. Cloth. Price, \$6.50. Pp. 380. Philadelphia and London: W. B. Saunders Company, 1955.

Five years ago the National Academy of Sciences-National Research Council contracted with Wright Air Development Center, United States Air Force, to gather and compile for publication the more basic established data in the various fields of biologic science. The present work is the second fascicle resulting from the project.

This volume is the product of contributions of more than eight hundred specialists in the field of biologic science in this country and abroad. It is intended as a concise but authoritative reference volume of the standard values in the field of nutrition and metabolism. The 223 pages of tables and 16 pages of diagrams are evidence of the work that has been done to reduce the assembled data to as concise a form as possible

and to assemble the same data to a usable form for quick reference.

This volume is the second of a series. The first, "Standard Values In Blood," was published in 1952 and there are other similar volumes in process of being completed. This volume will find its greatest appeal as a reference work for those doing research or writing in the field of nutrition and metabolism, and as a reference work in the larger libraries.

J. M. Barnes, M. D.

Reactions with Drug Therapy. By Harry L. Alexander, M. D., Emeritus Professor of Clinical Medicine, Washington University Medical School. Former Editor of the Journal of Allergy. Cloth. Price, \$7.50. Pp. 301. Philadelphia and London: W. B. Saunders Company, 1955.

With the continued introduction of new and more powerful therapeutic agents, the subject of untoward reactions and side reactions is becoming increasingly important. There is a steady procession of articles now appearing in current literature dealing with the unusual experiences of drug therapy but, until this volume appeared, there had not been any previous effort to assemble the available literature and information into one concise volume.

The first three chapters are devoted to what might be called the mechanics of drug reactions and it is here that the author divides reactions into two general categories: first, those with predominantly dermatologic manifestations; and second, those with systemic patterns. With this preamble, then, the author divides the drugs under consideration into groups along pharmacologic lines and discusses individually the more prominent drugs in each large group.

A volume such as this, which covers a field of medical literature not previously covered, is always welcome both as a subject for reading material and as a handy reference volume.

J. M. Barnes, M. D.

Urology Award—The American Urological Association offers an annual award of \$1000 (first prize of \$500, second prize \$300 and third prize \$200) for essays on the result of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been graduated not more than ten years, and to men in training to become urologists.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Statler Hotel, Boston, Massachusetts, May 28-31, 1956.

For full particulars write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1, 1955.

AMERICAN MEDICAL ASSOCIATION NEWS

SCIENTISTS REPORT UNIQUE EPIDEMIC

A unique epidemic is reported in the June 25 Journal of the American Medical Association.

Four Duke University scientists described an epidemic of North American blastomycosis a fungus disease limited to the United States and Canada. It occurred in 1953-54 in a four-mile area centering around the town of Grifton in Pitt County, N. C.

The disease, rarely diagnosed two decades ago except in a few medical centers, may occur in the Midwest, Ohio River Valley, and the southeastern United States, which are areas where some cases have occurred. The report was made in order to alert physicians and public health workers of those areas.

No cause for the epidemic has been found, but the scientists hope a study of the Grifton area and population may provide a clue to the method of disease spread.

Eleven cases of North American blastomycosis were admitted to Duke University Hospital within a few months. All patients lived either in Grifton or within a four-mile radius of the town.

The occurrence of 11 cases within a few months in a small area can be considered as "epidemic" since it was a sudden increase in contrast with the record of 14 cases scattered over the past 16 years through the much larger area of Pitt County and seven adjacent counties, the scientists said.

Blastomycosis is a chronic infection marked by tumors in the skin (cutaneous blastomycosis) or by lesions under the skin and in the lungs, bones, liver, spleen, and kidneys (systemic blastomycosis). The reported outbreak was primarily of the systemic type.

Common symptoms in the Grifton cases were low-grade fever, cough, discomfort, weight loss, loss of appetite, and inability to work. More severely ill patients had high fever and labored breathing.

All of the patients had pulmonary disease and only one had a blastomycotic lesion of the skin.

The only patient who died of blastomycosis in this outbreak had received no specific treatment before her death. Another recovered without treatment, while the others were treated with stilbamidine, a drug restricted largely to treatment of a few fungus infections.

"The results of this therapy are remarkable, since, prior to the introduction of stilbamidines, the mortality was as high as 92 per cent in patients with systemic cases followed two years or longer," the scientists said.

The earliest onset of the disease in the outbreak was in mid-October, 1953, and the latest in mid-March, 1954. The winter seasonal incidence is common for the systemic type.

"The disease probably does not spread from man to man," the researchers said.

Attempts to discover the source of the organism and the means of spread failed. However, it seems likely that persons contract the disease by breathing in the organism.

"The precipitating causes of the epidemic were not uncovered by this investigation, nor is it known why the epidemic ceased so abruptly," the scientists said. "Speculation has centered round the slightly increased rainfall; geological characteristics of the area; the exposure of patients to dirty atmospheres, rotting vegetation, or animal dejecta, and the possibility of direct transmission from animals or human beings and mechanical inoculation."

"The area will be under close surveillance next year during the same season in order to detect a recurrence should one occur," the scientists said.

Conducting the study were J. Graham Smith, Jr., M. D., Jerome S. Harris, M. D., Norman F. Conant, Ph. D., and David T. Smith, M. D., all of Durham, N. C.

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DIGITALIS INTOXICATION

CHAS. E. PORTER, M. D.

Fairfield, Alabama

One of the most challenging problems in clinical medicine today is the determination in a patient who is taking digitalis of whether the signs and symptoms are those of too much or too little digitalis. The commonest symptom of digitalis intoxication and the commonest arrhythmia associated with it may also be manifestations of progressive myocardial failure secondary to digitalis underdosage. As the age of the patient and the degree of failure advance, the problem becomes more difficult and presents itself more frequently. When one has solved the problem for a given moment it may present itself again and again in the same patient.

The purpose of this paper is to present a rational and practical approach to the problem and to present a few illustrative case histories.

The keystone in the recognition of digitalis intoxication is an awareness of the many and complex manifestations of it. The common symptoms are lack of appetite, nausea, vomiting, dizziness, spots before the eyes, diarrhea, and headache. The first three of these may be manifestations of congestive failure or due to other drugs commonly used in cardiology. Central nervous system symptoms are less often appreciated and may present as drowsiness, stupor, psychoses, aphasia, mania, ataxia, disorientation, and irritability.¹

Read before the Association in annual session, Montgomery, April 22, 1955.

The author is Chief of Medicine, Lloyd Noland Hospital, Fairfield, and Assistant Professor of Clinical Medicine, Medical College of Alabama, Birmingham.

1. Burwell, W. B., and Hendrix, J. P.: Digitalis Poisoning, *Am. J. Med.* 8: 640, 1950.

Digitalis has been said to cause every known type of cardiac arrhythmia.² Is the arrhythmia then due to digitalis or not? The answering of this question may challenge the ingenuity of even the most astute clinician. There are certain features of digitalis arrhythmias that may guide one to the successful recognition at times. When the electrocardiogram is not available the following points may be of benefit and indicate the likelihood of too much digitalis.

1. Extrasystoles occurring after digitalization.
2. Appearance of coupled rhythm.
3. Marked increases in heart rate.³
4. Change from previously irregular rhythm to regular with increase in heart rate.^{3,4}
5. Arrhythmias occurring within 48 hours after mercurial diuresis.

The appearance of the following ECG changes suggest digitalis intoxication.

1. Ventricular premature beats, particularly if multifocal in origin.
2. Bigeminal rhythm.
3. Ventricular tachycardia, either the common type or "bidirectional" type.
4. Atrial tachycardia with block.^{4,5}

2. Katz, L. N.: *Electrocardiography: Including an Atlas of Electrocardiograms*. Ed. 2. Philadelphia: Lea and Febiger, 1946.

3. Levine, H. D.: Abnormal Rapid Rhythms Associated With Digitoxin Therapy, *Ann. Int. Med.* 29: 822, 1948.

4. Reid, W. D.: Some Toxic Effects of Digitalis, *J. A. M. A.* 81: 435, 1923.

5. Lown, B.; Wyatt, N. E.; Crocker, A. T.; Goodale, W. T., and Levine, S. A.: Interrelationship of Digitalis and Potassium in Auricular Tachycardia With Block, *Am. Heart J.* 45: 589, 1953.

The first point to settle when any new patient presents himself with congestive failure or an arrhythmia is whether the patient has recently taken digitalis. It is amazing how difficult is the getting of this information. Only by a thorough questioning of the patient and family and calls to the druggist can it be obtained at times. But only by obtaining it, by whatever means, can we prevent the common and tragic episode of digitalizing patients who are already on maintenance doses. May I suggest, in this respect, that all prescriptions for digitalis bear the request that the bottle be labelled as such?

I would like to emphasize the fact that dangerous and even fatal arrhythmias may result from digitalis in the absence of any subjective symptoms.^{4,6}

Having decided that the problem is one of digitalis intoxication, treatment usually consists of the following two measures:

1. Immediate cessation of digitalis intake and cessation of diuretic measures.
2. Use of potassium salts or Pronestyl.

Potassium may be said to have had its beginning in the management of arrhythmias when Ringer⁷ showed that an increase of potassium in the fluid perfusing the heart would prevent extrasystoles. Following this, the first systematic clinical use of potassium for arrhythmias was by Sampson,⁸ who demonstrated its effectiveness in both atrial and ventricular arrhythmias. Enselberg⁹ and his group were able to abolish various toxic arrhythmias of digitalis with potassium chloride.

Pronestyl is also beneficial and may be given orally or intravenously. Its effectiveness in preventing digitalis-induced ventricular tachycardia has been shown,¹⁰

and it will abolish the other types of toxic rhythms as well. Pronestyl may produce toxic arrhythmias itself, however, and must be used with caution in elderly patients.¹¹ When given orally the usual initial dose is 0.5 to 1 gm. followed by 0.5 gm. every 3 or 4 hours until the desired result is obtained. When given intravenously, we prefer to dilute it 1 to 10 and give 10 mg. per minute. Hypotension and widening of the QRS are frequent occurrences following its intravenous use and if either occurs to a significant degree, the drug should be stopped or rate of injection slowed.

We prefer potassium chloride either orally or by infusion because it is less expensive and offers some diagnostic information. It is less likely to affect those arrhythmias not associated with digitalis intoxication.

Whether potassium is given orally or intravenously depends upon the given situation. In hospitalized patients where monitoring with continuous electrocardiograms is possible, the intravenous route is preferable. Forty milliequiv. of potassium chloride dissolved in 500 cc. of glucose in water can be given in one hour. Usually the rhythm changes within a few minutes if digitalis is responsible. Potassium salts should only be given by slow drip and never from a syringe by rapid injection even in small doses. The usual ECG changes of hyperkalemia should be guarded against. Pointed or tent-shaped T waves will probably be the first evidence of it.¹⁰ Potassium salts should be given only with extreme caution in the presence of functional impairment of the kidney and should never be given except when there is adequate urinary output.¹²

In lesser degrees of toxicity, potassium chloride may be given by mouth. Five gm. dissolved in cold orange juice is the usual initial dose, and 4 to 8 gm. may be given daily thereafter in divided doses as long as it is needed. The arrhythmias commonly occurring after mercurial diuresis may be prevented by giving potassium chloride for one or two days after each injection.¹¹

It is realized that, all too frequently, one may be faced with a patient in the home

6. Marvin, H. M.: Paroxysmal Ventricular Tachycardia With Alternating Complexes Due to Digitalis Intoxication, *Am. Heart J.* 4: 21, 1928.

7. Ringer, S.: *J. Physiol.* 3: 380, 1882; 4: 429, 1883.

8. Sampson, J. J., and Anderson, E. M.: The Treatment of Certain Cardiac Arrhythmias With Potassium Salts, *J. A. M. A.* 99: 2257, 1932.

9. Enselberg, C. D.; Simmons, H. G., and Mintz, A. A.: The Effects of Potassium Upon the Heart, With Special Reference to the Possibility of Treatment of Toxic Arrhythmias Due to Digitalis, *Am. Heart J.* 39: 713, 1950.

10. Levine, H. D.; Vazifdar, J. P.; Lown, B., and Merrill, J. P.: "Tent-Shaped" T Waves of Normal Amplitude in Potassium Intoxication, *Am. Heart J.* 43: 437, 1952.

11. Lown, B., and Levine, S. A.: *Current Concepts in Digitalis Therapy*, Little, Brown and Company.

12. Millie, W. G.: Potassium Poisoning in Nephritis, *Arch. Int. Med.* 16: 330, 1915.

who is known to have taken digitalis and who is in acute pulmonary edema. After a careful inquiry and examination one may still be unable to decide whether to give the patient more digitalis intravenously or not. As Harold Levine stated so clearly in reference to the physician confronted with this problem, "After marshalling all available evidence, he is compelled to make a gamble one way or the other."⁴ In most instances, the safer course is to withhold digitalis,¹ administer potassium salts or Pronestyl by mouth, and use those measures other than digitalis that are of benefit in pulmonary edema. After one hour, if there is no improvement, one may proceed with the cautious use of further digitalis, preferably one that is quickly effective and rapidly excreted, such as lanatoside-C or acetyl strophanthidin.

This latter drug has not yet been released

some of the problems previously mentioned.

Case No. 1 (Hosp. No. 257,192): A 66 year old man was digitalized with digitoxin in November 1953 because of heart failure secondary to hypertension. The electrocardiogram then showed left bundle branch block. On February 1, 1954, because of the presence of premature beats and because of the opinion of some people¹³ that Gitaligen is less "toxic," digitoxin was stopped and Gitaligen, 0.5 mg. daily, was given. Seven days later he was admitted in acute pulmonary edema and was moribund. The heart rate was 170 with an irregular rhythm. Because of the increased rate and appearance of premature beats one week previously, it was thought that these changes were those of digitalis intoxication. Fig. 1 shows the initial tracing and what is probably atrial tachycardia with AV block and polymorphism of the QRS. This is a

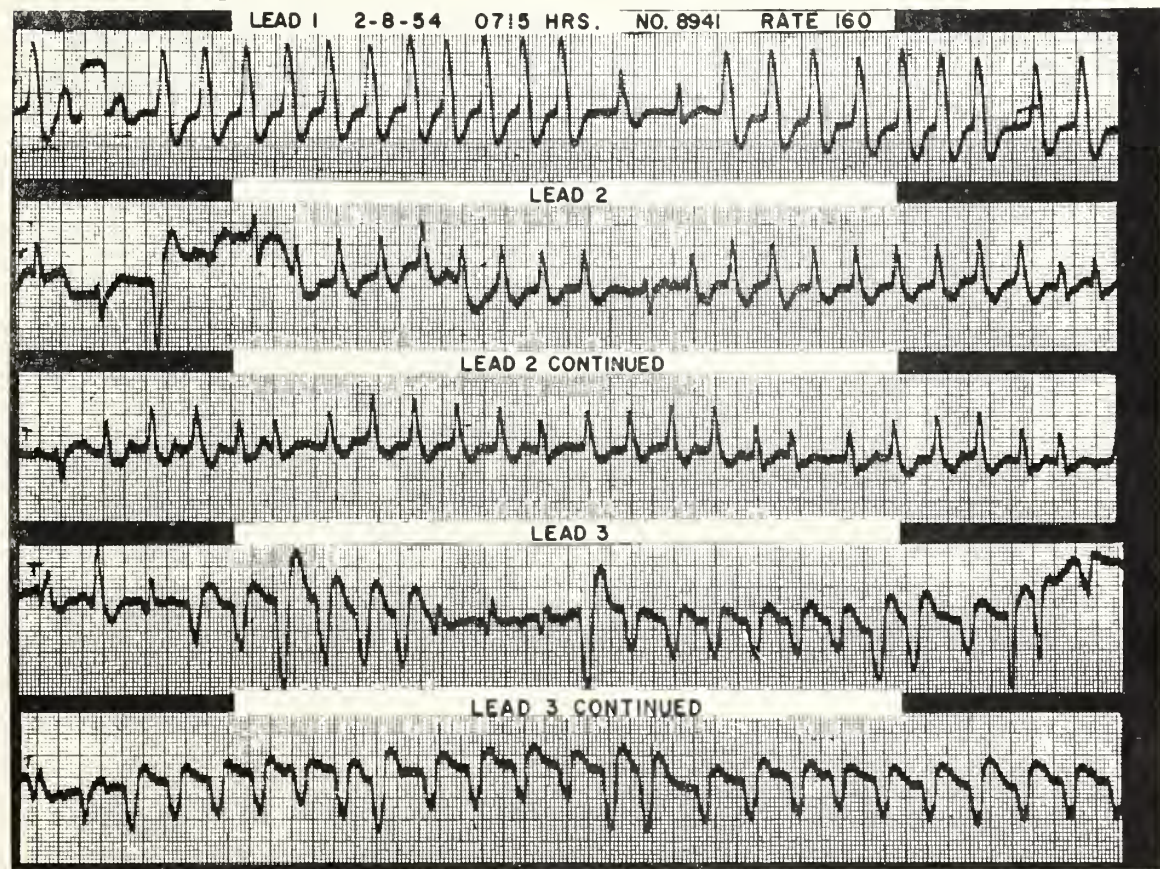


Fig. 1. Case 1. Acute pulmonary edema in a patient taking digitoxin and later Gitaligen who is known to have a left BBB. Notice the variation in contour of the QRS and that P waves are demonstrable in lead 3. This is atrial tachycardia with block and is frequently seen shortly before the development of ventricular fibrillation.

but promises to be quite valuable. It is the most rapid acting of all the digitalis group, including ouabain.¹¹

The following case histories illustrate

13. Batterman, R. C.; Degraff, A. C., and Rose, O. A.: The Therapeutic Range of Gitalin (Amorphous) Compared With Other Digitalis Preparations, *Circulation* 5: 201, 1952.

dangerous rhythm and is considered to portend the development of ventricular fibrillation.⁵ Shortly before Pronestyl was given, the rate increased from 170 to 180 (fig. 2), and the rhythm became regular. This was due to the development of a 1:1 AV response. Notice that there then followed a gradual slowing of the rate after Pronestyl and potassium (fig. 3). Along with this slowing of the rate there was also a gradual disappearance of all evidence of pulmonary edema.

chest. The typical sea-gull murmur of a ruptured aortic cusp was heard. In January 1951 he developed subacute bacterial endocarditis, and a year later he went into failure and was digitalized with digitoxin. On October 7, 1952, following considerable exertion, he was admitted to the hospital because of dyspnea. The first ECG (fig. 4) shows a slightly prolonged PR interval, ventricular and nodal premature beats, and not shown are runs of nodal tachycardia which appeared for a short burst. Digitalis

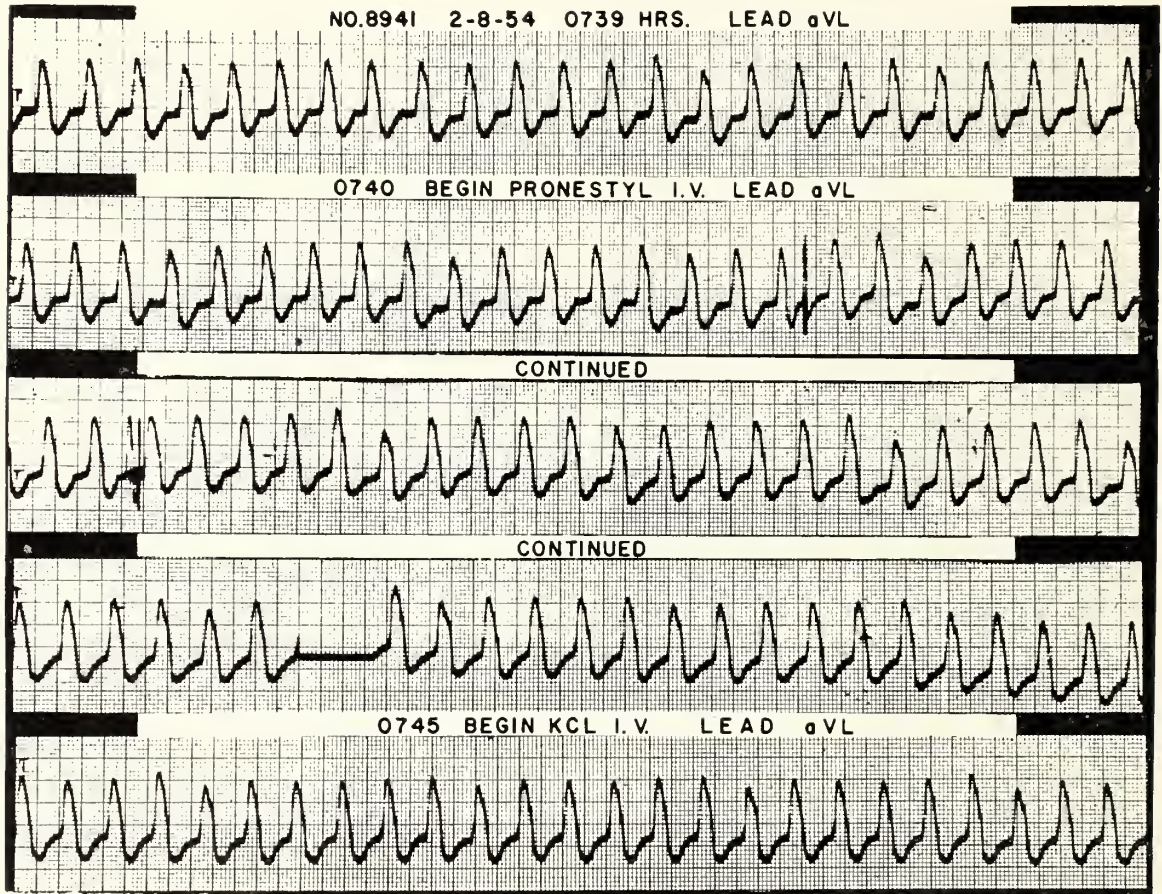


Fig. 2. Case 1. The rhythm is regular due to 1:1 AV response. Pronestyl and later I. V. KCl were given because the rhythm was thought to be due to digitalis intoxication.

This case is an example of the most serious type of digitalis intoxication. Had we not known of his previous medications, the initial rhythm would clinically have resembled atrial fibrillation which might have called for rapid digitalization. This would most likely have been fatal.

The next case is somewhat simpler and more common.

Case No. 2 (Hosp. No. 243,498) is a fifty-five year old man whose wife sent him to us in 1947 because she heard a noise in his

was stopped and ECG No. 2 (fig. 5) shows a normal PR interval and no ectopic beats.

This case illustrates that exercise may bring out evidence of overdigitalization.¹¹

Case No. 3 (Hosp. No. 251,350), a 54 year old farmer, was digitalized in 1937 because of dyspnea. He would take digitoxin to the point of nausea and stop it a week or two. Five weeks prior to admission he developed symptoms of diabetes. Two weeks before admission his dose of digitoxin was doubled. On admission the blood sugar was 460 mg.,

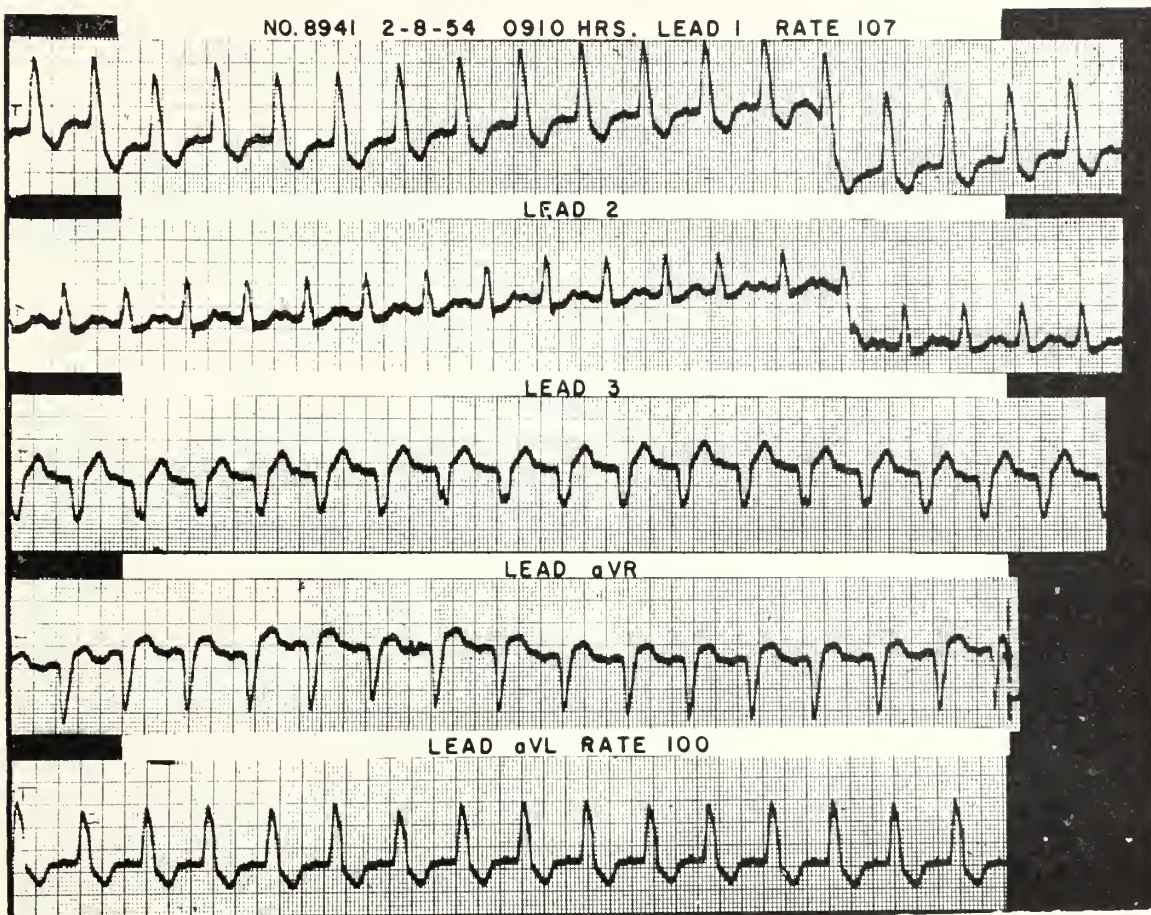


Fig. 3. Case 1. Notice the gradual slowing of the rate to normal. Along with this there was prompt clearing of the pulmonary edema. The patient is still living and doing well as of April 1955.

his heart rate was 130, and the rhythm was atrial tachycardia with block. Twelve hours after oral potassium chloride the rhythm was sinus at a normal rate.

This case was most likely due to digitalis overdosage and perhaps precipitated by the acidosis of diabetes. Again, the rhythm clinically resembled atrial fibrillation.

That intravenous potassium chloride is dangerous is shown by the following case.

Case No. 4 (Hosp. No. 267,441). A 50 year old man was first seen for pulmonary edema on February 3, 1955. The blood pressure was 200/110. He was given lanatoside -C, 1.6 mg. (fig. 6) intravenously. Notice the lengthened PR interval and the ectopic beats. These were thought to be due to digitalis and intravenous potassium chloride was started. After 20 milliequiv. the rhythm was normal but the remainder of the clysis was inadvertently allowed to run in so that he received a total of 40 mEq. Fig. 7 shows the ST segment depression of digitalis is now gone, there are no P waves present,

and previously inverted T waves are now upright. These are advanced changes of hyperkalemia. Fig. 7 also shows the gradual disappearance of these signs after glucose and insulin therapy.

This patient was later found to be in renal failure and this explains this type of response.

The next case is an example of digitalis poisoning precipitated by diuresis from a mercurial. This problem has been of especial interest to Dr. Levine and Dr. Lown who now feel that it is due to potassium loss.¹¹

Case No. 5 (Hosp. No. 239,873). A 63-year old male was digitalized with digitoxin in 1951 because of hypertensive heart disease. On May 9, 1952 he received 2 cc. of Mercurhydrin and lost 10½ pounds in 4 days. On May 13, 1952 he was noted to have a rare premature beat but more Mercurhydrin was given anyway. The following day he became dizzy and more short of breath and complained of a headache.

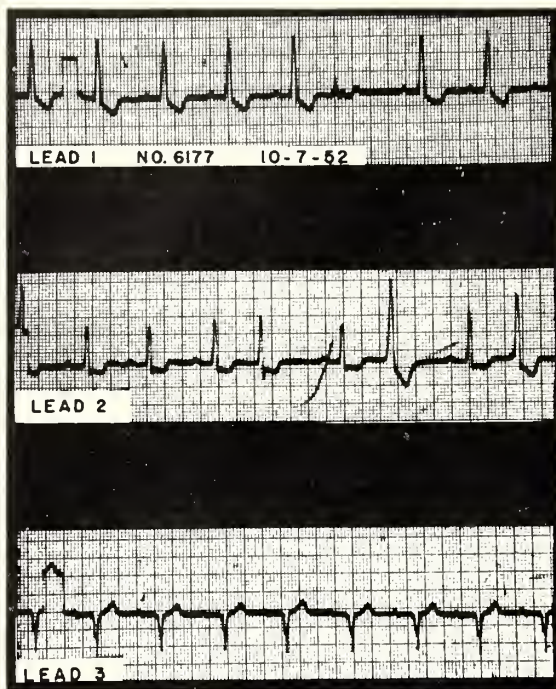


Fig. 4. Case 2. Heart failure due to aortic regurgitation. Patient was taking digitoxin. Above ECG was made shortly after unusual exertion and shows ventricular and nodal premature beats and prolonged P-R interval.

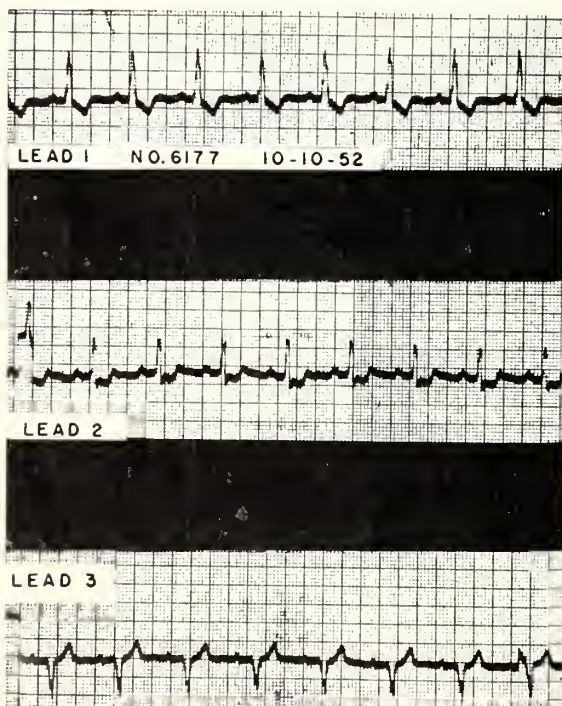


Fig. 5. Case 2. Digitalis has been stopped and all evidence of digitalis toxicity disappeared. The signs of digitalis intoxication were precipitated by physical exertion.

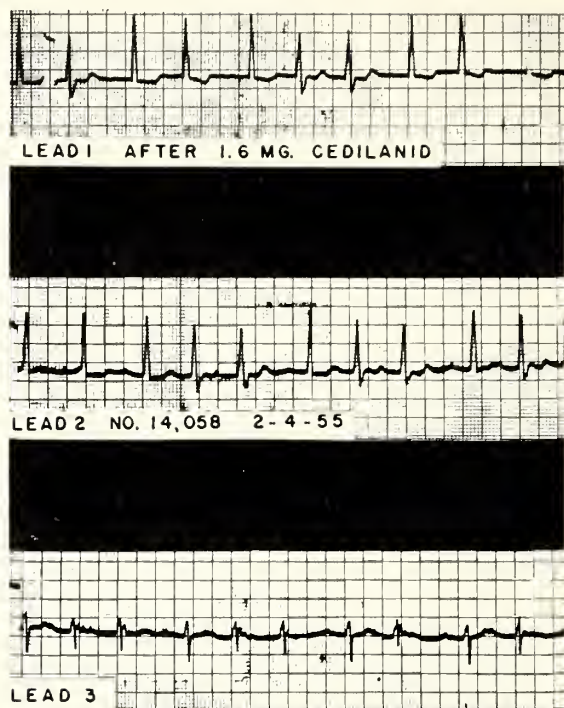


Fig. 6. Case 4. A hypertensive who was given 1.6 mg. lanatoside-C intravenously. Notice the premature beats that are probably of atrial origin with aberration of the terminal portion of the QRS.

The first ECG revealed a prolonged PR interval, ventricular premature beats and bursts of ventricular tachycardia. He was given Pronestyl by mouth, and 24 hours later he felt better but the arrhythmia remained. Forty-eight hours later the rhythm was normal.

It has been claimed that Gitaligen is the safest of all digitalis preparations mainly because of the wider range between the therapeutic and toxic levels.¹³ The following case is presented as a reminder that, with this preparation as with all other digitalis preparations, toxic rhythms should be watched for.

Case No. 6 (Hosp. No. 265,729). A 68-year old hypertensive was given 2 mg. of Gitaligen a day for 4 days. On the 4th day she was found to have frequent premature beats. She was given potassium chloride by mouth with prompt disappearance of the ectopic rhythm.

Case No. 7 (Hosp. No. 261,372). A 63-year old man with bronchial asthma was admitted on June 28, 1954 with a three day history of fever, cough and rapid heart action. He was in acute pulmonary edema with a heart rate of 180 and an irregular

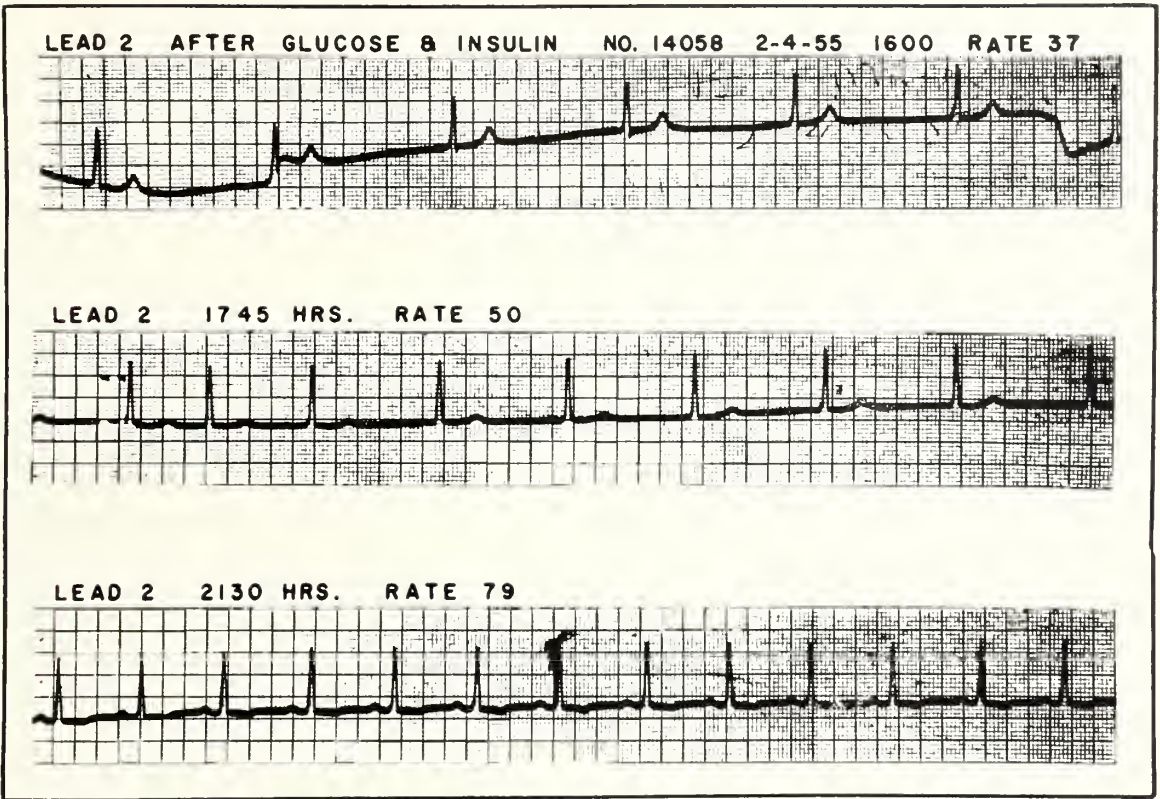


Fig. 7. Case 4. After 40 mEq. of KCl was given I. V., signs of hyperpotassemia developed. Notice in the upper tracing that the ST segment is at the baseline, P waves have disappeared and the T waves are upright and somewhat pointed. Following treatment with glucose and insulin these abnormal ECG changes were abolished.

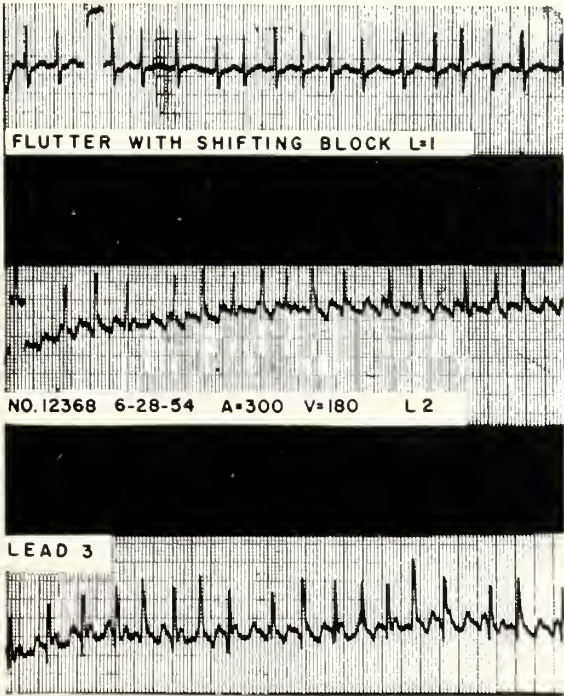


Fig. 8. Case 7. Admission ECG of a patient in acute pulmonary edema. Notice the flutter waves in lead 2 and the irregular rhythm due to varying AV block.

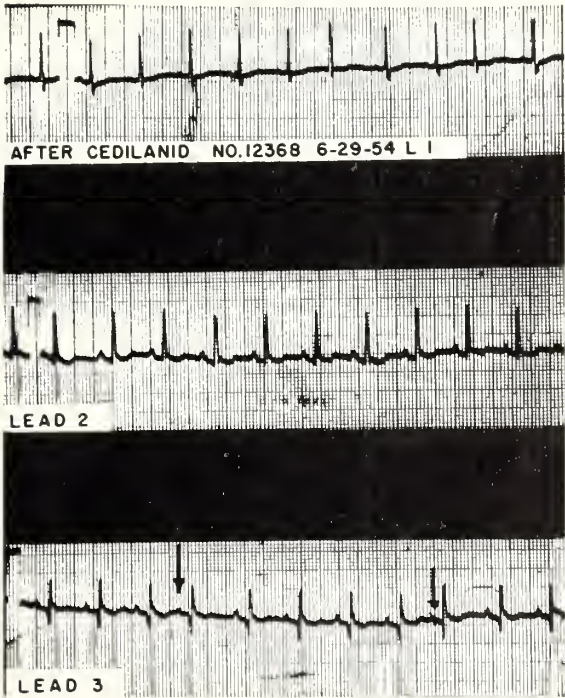


Fig. 9. Case 7. After lanatoside-C compensation was restored along with sinus rhythm. Note the atrial premature beats in lead 3.

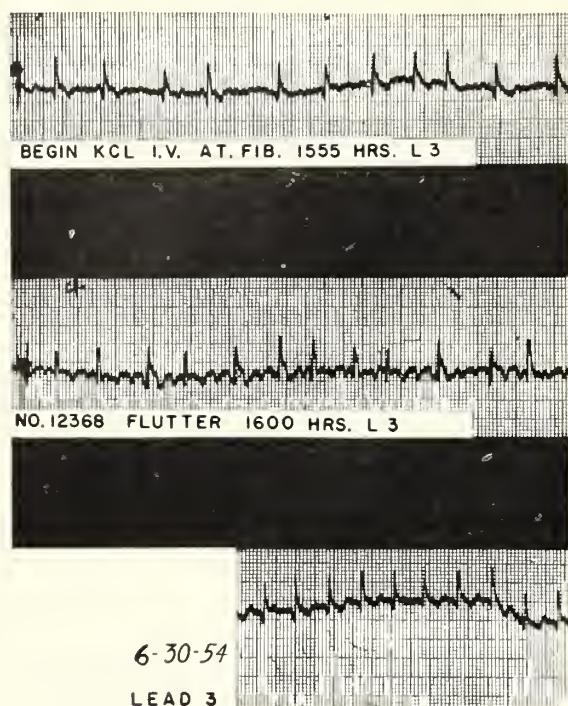


Fig. 10. Case 7. Further lanatoside-C was given because an increase in the heart rate was thought due to "escape" from digitalis. The patient's condition worsened. Atrial fibrillation is shown in the top tracing and after KCl atrial flutter appeared for a short time.

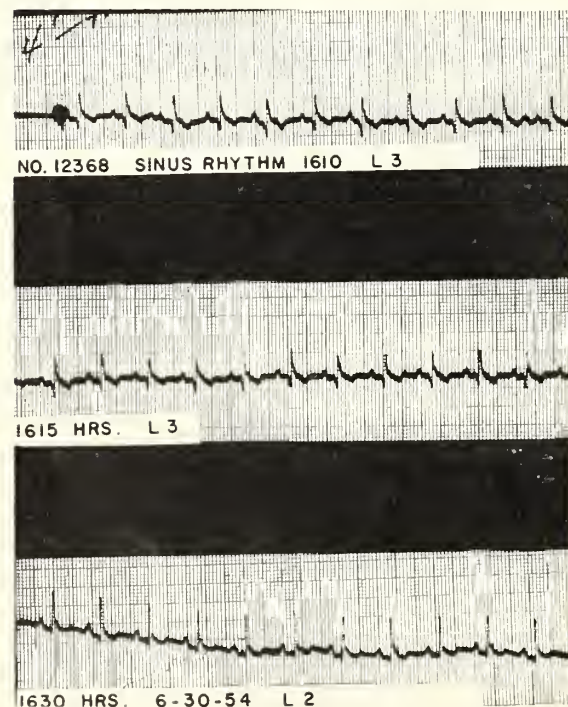


Fig. 11. Case 7. The top tracing was made 15 min. after I.V. KCl was started and shows a normal sinus mechanism.

rhythm due to atrial flutter with shifting block (fig. 8). He was given lanatoside-C and in 24 hours the rhythm was regular (fig. 9). Digitalization by mouth with Gitaligen was begun and on June 30, 1954 the rate had increased to 140. He was thought to be underdigitalized and further lanatoside-C was given. Following this he developed atrial fibrillation (fig. 10) and so it was decided to treat him as a case of digitalis poisoning. Accordingly, potassium chloride was given intravenously by slow drip. Five minutes later the rhythm had changed to atrial flutter and 15 minutes later sinus rhythm was restored (fig. 11).

This is a situation in which an irregular rhythm was associated with cardiac decompensation. Digitalis restored compensation and sinus rhythm returned. Later the irregular rhythm reappeared and naturally it was assumed that he had "escaped" from digitalis effect. Just the opposite occurred, however, and treatment with potassium chloride solved the problem within 15 minutes.

I am sure that all of us at one time or another have found ourselves in the position of having to scold our patient for not taking his digitalis regularly. In reviewing some of the records at our institution for the past five years, more than one was found in which I strongly suspect that the patient was better off, at least temporarily, for having missed a dose now and then. There can be little doubt that digitalis is the most useful drug we possess for the treatment of heart failure and cardiac arrhythmias. It may be best to remind ourselves however from time to time that there are three possible results from digitalis instead of two, namely, it may help, it may not help, or it may make the patient worse.

We are doing a better job in reducing the tuberculosis death rate than in reducing the number of cases. At present the annual number of reported cases of tuberculosis is declining by only three per cent in contrast with a 20 per cent drop in the death rate each year since 1951. Last year is the first time in our history when tuberculosis did not rank among the first 10 causes of death. In spite of this good showing we have not won the battle against tuberculosis. We will not have won it until we achieve comparable success in reducing the large reservoir of tuberculosis infection still prevailing in most parts of the country. We can do this—but only through a continued and concerted effort to find and treat larger numbers of people annually in the early stages of their disease.—Leonard A. Scheele, M. D., *Bull. Nat. Tuberc. A.*, May 1955.

DIVERTICULITIS OF THE CECUM

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Montgomery, Alabama

Diverticulitis of the cecum must be considered in the differential diagnosis of lesions causing peritoneal irritation in the right lower quadrant, with or without a mass. The symptoms and findings are those of acute appendicitis or one of its immediate complications. Most acute cases are justifiably diagnosed as acute appendicitis unless the appendix has been removed at some earlier date. The diagnosis is not always made correctly at surgery since the diverticulum is often buried in a mass of edematous, inflamed tissue, and the lesion is thought to be neoplastic. Such an error in diagnosis at the time of surgery is of great importance since it usually leads to unnecessary radical surgery with its higher mortality rate. In the past several years numerous cases have been reported by various authors, and their management discussed. The increased interest in this condition is apparently due to the realization that it is more common than at one time thought, and also the appreciation that it is an important surgical lesion. Seven cases are reported which have been seen on the surgical service of St. Margaret's Hospital, Montgomery, since 1947. Five of these were seen in 1953.

INCIDENCE

It is estimated by some investigators that diverticula of the large bowel occur in 10 to 33 per cent of the population, and that 1 to 1.7 per cent of the diverticula occur in the cecum. Mayo, in 1950, found two cases of diverticulitis of the cecum in 202 surgically resected cases at the Mayo Clinic. Case and Shea, in 1953, in a study of 431 cases of diverticula of the colon reviewed at St. Vincent's Hospital between 1940 and 1950, found only seven cases to involve the cecum (1.7%). In an attempt to learn more about the incidence and occurrence of this disease, a review of all barium enema examinations done at St. Margaret's Hospital from 1950 through 1954 revealed the following: total cases reviewed, 562; total cases with diverticula, 127; total cases with diverticula of the cecum, 10; percentage of patients examined with diverticula of the colon, 22.6%; percentage of patients with

diverticula who had diverticula of the cecum, 7.9%; percentage of patients examined who had diverticula of the cecum, 1.8%. Spriggs and Marxer, cited by Epstein, found cecal diverticula in 7% of the cases with diverticula of the colon.

Potier, in 1912, described the first recorded case of cecal diverticulitis. Lauridsen and Ross, in 1952, reviewed the literature and found 149 cases reported. To these they added four cases. Since that time numerous authors have reported various numbers of cases.

It is felt that this condition is more common than one would suppose. There are undoubtedly many cases that have not been reported in the literature. Likewise, many abscesses encountered and drained in the right lower quadrant have been diagnosed as appendiceal in origin where, on closer examination, many of these would be found to have originated from a ruptured diverticulum of the cecum rather than from a ruptured appendix.

ETIOLOGY

The etiology of cecal diverticula is not clearly established, and there is a great difference of opinion. Diverticula may be congenital or acquired. Waugh suggested that some of these lesions might be duplications of the appendix. Greensfelder and Hiller suggested that the lesions might be due to the retention in some residual form of the lateral appendix which is present in embryonic life but normally disappears before the true appendix develops. The following are the most important etiological factors in the formation of acquired diverticula as pointed out by Vaughn and Narsete: (1) enterogenous cysts which are commonest in the ileocecal region, usually medial in position; (2) eversion of a weakened area in the cecal wall resulting from an intraluminal rupture of an appendiceal stump or stump abscess; (3) eversion of an area due to postoperative intraluminal migration of a purse string suture; (4) traction by intra-abdominal adhesions; (5) traction on the appendices epiploicae, mesentery or omentum with or without adhesions; (6) weakening of the bowel wall at point of vascular entry; (7) inherent weakness of the penetrating vessels; (8) increased in-

traluminal pressure; (9) trauma during intra-abdominal surgery; and (10) cathartics and purgatives. A cecal diverticulum becomes inflamed when its neck is obstructed, much the same as does the appendix.

DISCUSSION

Diverticula of the cecum have been classified into two types, true and false. In the true diverticulum, all layers of the cecal wall are present, while in the false diverticulum the muscularis layer is absent. It is generally felt that diverticula of the cecum are, as in other portions of the colon, false type lesions. Jeremin points out that in the cecum it is unsound to classify diverticula as congenital or acquired on the basis of presence or absence of muscularis since various etiological mechanisms operate which differ from those causing left-sided diverticula. In long standing cases containing fecaliths the mucosa and muscularis may be ulcerated, and the muscularis replaced wholly or in part by fibrous tissue. It really makes no difference whether the diverticula are true or false since the symptoms and findings are usually similar in both, and the treatment is the same.

Diverticula of the cecum are usually described as solitary, but occasionally they are multiple. Fecaliths are present in over 50% of the cases. This high incidence of fecaliths may be due to the absence of the muscular portion of the wall of the diverticulum resulting in diminished propulsive force, thus allowing feces to remain in the diverticulum. Likewise, the presence of fecaliths probably causes many diverticula of the cecum to go unnoticed on barium enema examination.

Anderson points out that the average age of patients with this condition is 39.1 years, and that the sex distribution is about equal. Diverticulitis of the sigmoid occurs in a much older age group, and is twice as frequent in men as in women.

In acute cecal diverticulitis one of the following conditions may develop: resolution, local or general peritonitis, abscess, perforation or fistula. Unger reports a case in which a fistula developed between the terminal ileum and the diverticulum. Case and Shea report a case in which there appeared to be a cecovesical fistula. Intestinal obstruction, a frequent complication of sigmoid diverticulitis, has not been reported. Generalized peritonitis is rare, and the usual finding is a localized inflammatory

mass involving the cecum. The appendix is usually normal or only minimally involved.

DIFFERENTIAL DIAGNOSIS

The preoperative diagnosis of cecal diverticulitis is usually that of acute appendicitis or one of its complications. In Anderson's series, 84% of the cases reported were diagnosed preoperatively as some form of acute appendicitis. Only 6% of the cases were correctly diagnosed preoperatively. Acute appendicitis in some form was the preoperative diagnosis in six cases of this series reported from St. Margaret's Hospital. In case No. 3 the appendix had been removed some eighteen years previously, and a preoperative diagnosis of malignancy of the cecum was strongly considered.

The symptoms and signs are those of an acute inflammatory process in the right lower quadrant. These are usually indistinguishable from those of acute appendicitis. In such cases, where nausea and vomiting are absent, one might consider acute cecal diverticulitis more strongly since Lauridsen and Ross found that these symptoms were present in a much smaller percentage of cases of cecal diverticulitis than in cases of acute appendicitis. Nausea occurred in only 27% of the cases of acute cecal diverticulitis as compared to 78% among the cases of acute appendicitis, and vomiting occurred in only 16% of the diverticulitis cases as compared to 73% of appendicitis cases. A mass is usually palpable and, depending on the history, a diagnosis of appendiceal abscess, appendix wrapped in omentum, carcinoma of the cecum, carcinoid, foreign body perforation or cecal granuloma is made. The condition referable to the appendix may be eliminated in those cases where the appendix has been previously removed, except in the rare instance of stump appendicitis. If cecal diverticulitis is considered in such cases, and the mass carefully examined at surgery so as to feel the mouth of the diverticulum through the opposite cecal wall, the correct diagnosis will be made more frequently than in the past. Roentgen examinations may be of some diagnostic help in the more chronic cases. Barium enema may show a defect in the cecal wall, and in such cases neoplasm must be ruled out at the time of laparotomy. Diagnosis is not always easy at operation due to the inability of the surgeon to differentiate between the inflammatory mass of a perforating diver-

ticulum and a perforating carcinoma. This was brought out by Lauridsen and Ross in their reviews of 153 cases where major surgery was carried out in thirty-nine cases (29.5%). Immediate frozen section and microscopic examination will be helpful if tumor cells are identified. It is important that a correct diagnosis be made at surgery so that an unnecessary radical operation with its higher mortality rate will not be done for a benign condition.

Carcinoma, aside from appendicitis, is the most frequent lesion of the cecum. There are three types of carcinoma of the large bowel: (1) the type that grows with cauliflower projections into the lumen of the bowel and is slow to metastasize; (2) the type that grows by direct extension through or along the wall of the bowel and is less apt to show glandular metastasis; (3) the type that ulcerates early through the bowel wall and shows many glandular metastases at operation. If these are kept in mind, the differential diagnosis between cecal diverticulitis and neoplasm will be much easier. Tuberculosis is the next most frequent lesion involving the cecum and is a more chronic condition than diverticulitis. The condition is rarely limited to a solitary circumscribed mass. The ileum is usually involved, and small tubercles can be seen on the peritoneum and serosa. There is a marked ileocecal and mesenteric adenitis. Actinomycosis usually involves the appendix or cecum. It is characterized by chronicity and massive fibrosis with usually a small quantity of pus present in multiple sinuses. Simple ulcers of the cecum of unknown etiology usually occur on the medial aspect and a few centimeters beyond the ileocecal valve. Diverticula occur most frequently on the lateral and anterior wall of the cecum, and if they occur on the medial wall they are usually below the ileocecal valve. Terminal ileitis and amebic ulcer of the cecum must also be considered. In regional ileitis the condition is rarely so acute. There is usually generalized thickening of the adjacent ileum, and marked mesenteric adenitis is ordinarily present. Amebic ulcer may be diagnosed by the associated pathology and history, and with the aid of laboratory data.

TREATMENT

Diverticulitis of the cecum must be considered a surgical disease since acute appendicitis, ordinarily, cannot be ruled out.

General supportive measures, chemotherapy, antibiotics, sedation and gastro-intestinal intubation should be utilized as indicated. The surgical treatment of choice is simple excision of the diverticulum, with closure of the defect in the cecal wall. Incidental appendectomy may be done at the same time with very little added risk. If the inflamed diverticulum is close to the ileocecal valve or in the mesentery, and excision would compromise the patency of the ileocecal valve or the blood supply to the cecum, simple drainage of the inflamed area may be adequate. If the surgeon feels that this will not adequately handle the situation, then resection, with ileocolostomy in one or two stages, may be done. If an abscess is encountered, simple drainage may be carried out.

PROGNOSIS

The prognosis in cecal diverticulitis is quite good if the correct diagnosis is made at surgery. An overall mortality rate of 4.8% was reported by Lauridsen and Ross in their review of the literature in 1952. In the cases where simple excision was carried out, the mortality rate was 1.6%. In thirty-nine cases with an incorrect diagnosis of malignant disease at operation, there was a 10.3% mortality rate.

CASE REPORTS

Case No. 1 (I-5827): This patient was a thirty-four year old white female with a history of cramp-like, low abdominal pain localizing in the right lower quadrant, duration thirty-six hours. Epsom salt had been taken at the onset of abdominal pain, and there were several loose stools attributed to the laxative. Two weeks previously, a dilatation and curettage had been done, and a cervical polyp was removed. On abdominal examination there was tenderness in the right lower quadrant with no masses and no rigidity. Pelvic examination revealed some tenderness and fulness in the right adnexal region. White blood count was 6,200, with polymorphonuclears 70%; red blood count was 3,940,000, with hemoglobin of 78%. The urinalysis was negative. It was thought that the patient had some tubal pathology, so conservative therapy was instituted. On the third day after admission the pain continued, and the tenderness in the right lower quadrant remained unchanged. At this time the temperature was 99.2, and the white blood count was 7,800. There was no nausea and

no vomiting. On the morning of February 28, 1947, four days after admission, the abdomen was opened through a low midline incision. The pelvic organs were normal. The appendix was innocent; it was removed in routine manner, inverting the stump. On the anterior lateral wall of the cecum there was an acute inflammatory process having the appearance of an inflamed diverticulum. The mass was resected and the cecal wall closed. The abdominal wound was closed without drainage, and the patient made an uneventful recovery, being discharged from the hospital March 7, 1947.

Case No. 2 (K-3626): This patient was an eighteen year old white male who gave a history of generalized cramp-like pain in the lower abdomen on the morning of admission, July 14, 1949. The pain localized in the right lower quadrant. There was no history of diarrhea, nausea or vomiting. There had been no previous similar attacks. Physical examination revealed temperature of 99, pulse 88, respirations 18, blood pressure 120/75. Abdominal examination revealed a localized tenderness in the right lower quadrant with some muscle spasm. No mass was felt. There were no other abnormalities. White blood count was 16,000, with 71% polymorphonuclear leukocytes. The urine showed no abnormality. On the day of admission the patient was explored through a McBurney incision. A mass was found along the lateral wall of the cecum, about one inch from the base of the appendix. A depression about one centimeter in diameter could be felt in the mass through the opposite wall of the cecum. It was felt to be a definite diverticulum which had ruptured into an epiploicæ. The mass was invaginated into the cecum, and the cecal wall was closed with two rows of sutures. The area was drained. The induration of the cecal wall extended to the base of the appendix, and the appendix was not removed. The postoperative course was uneventful, and the patient was discharged on the seventh postoperative day.

Case No. 3 (20532): This forty-five year old white female was admitted on January 10, 1953, giving a history of gas and abdominal distention for ten days. Two days prior to admission she had developed generalized abdominal pain which localized to the right lower quadrant one day before admission. There had been no chills, fever, nausea, vomiting or diarrhea. There had been no

loss of weight; there had been no previous similar episodes. Her appendix had been removed eighteen years before. White blood count was 13,000, with polymorphonuclear leukocytes 85%. Urine was negative. Intravenous pyelogram showed normal kidney outline and function. A barium enema was done, and it revealed a filling defect in the anterolateral wall of the cecum. This represented a lesion extrinsic to the cecum or in the cecal wall. There were also a few small diverticula of the sigmoid, transverse and descending colon. Examination of the abdomen revealed a healed McBurney scar. There was a tender, slightly movable mass in the region of the cecum. Pelvic examination revealed no abnormality. After the bowel was prepared, the abdomen was opened through a low midline incision. An indurated mass was found in the wall of the cecum. The ileocecal valve was identified. A second crater-like opening was felt, separated from the valve and associated with the mass. It was interpreted as a diverticulum of the cecum with rupture and abscess formation. Multiple glands were palpated in the mesocolon supplying the cecum and ascending colon, and in the mesentery of the terminal ileum. The possibility of malignancy was strongly considered. As the bowel had been well prepared, a wide resection was decided upon. A side-to-side ileotransverse colostomy was done. The patient did well postoperatively, and was discharged home on the fourteenth postoperative day.

The pathological report was as follows: a definite diverticulum of the cecum, ruptured, with abscess formation, perforation one-half centimeter in diameter. The mass measured 6 x 5 centimeters. Fecal material was present in the abscess cavity.

Case No. 4 (21425): This thirty-six year old white male was admitted to the hospital on March 9, 1953 with a history of generalized abdominal pain, duration two days. He had nausea the day prior to admission, and his appetite was poor. A laxative consisting of caroid and bile salts was taken at the onset of the present illness. There had been no previous similar attacks, and the appendix had not been removed. There had been no localization of the pain, but the pain persisted. Abdominal examination revealed a definite localized tenderness in the right lower quadrant, extending under the rectus muscle and to a lesser extent into

the right flank. No mass was palpable. On rectal examination, tenderness was noted high on the right side. White blood count was 10,000, with polymorphonuclear leukocytes 67%, hemoglobin 94%. Red blood count was 5,030,000. The urinalysis was negative. A preoperative diagnosis of acute appendicitis was made, and the abdomen was opened through a McBurney incision with a Weir extension. Intra-abdominal examination revealed an inflammatory mass the size of a silver dollar on the lateral wall of the cecum. The appendix was not involved in the mass, and the appendix was removed. The impression was gained that this was a defect in the lateral wall of the cecum, probably a diverticulum with inflammatory reaction about its neck, involving the cecal wall. A pad of fat was sutured over this defect satisfactorily. The wound was closed, a drain being placed to the peritoneum. The postoperative course was uneventful, and the patient was discharged on the seventh postoperative day.

Case No. 5 (25278): This fifty-three year old white male was admitted on November 24, 1953 with a history of sudden onset of anterior abdominal pain, duration of five hours. The pain was associated with fever, nausea and vomiting. There had been no urinary or respiratory complaints. He had had no similar previous attacks. He had been hospitalized on two occasions during the past several years for hypertensive cardiovascular disease. Physical examination revealed temperature 101, pulse 96, respirations 20, blood pressure 210/130. The chest was clear. The heart was enlarged to the left and downward. Abdominal examination showed marked tenderness in the right lower quadrant. White blood count was 19,850, with polymorphonuclear leukocytes 80%. Red blood count was 4,500,000, hemoglobin 88%. Urine showed albumin four plus with casts. In view of the cardiovascular and renal condition, conservative therapy was instituted. The next day tenderness had increased, and there was a suggestion of a mass in the right lower quadrant. Operation was advised. Preoperative diagnosis was (1) appendicitis, ruptured, with abscess formation, (2) hypertensive cardiovascular disease. The abdomen was opened through a McBurney incision. A large inflammatory mass was felt in the posterolateral wall of the cecum above the appendix. The appendix was benign. A right

rectus incision was required to deal with the lesion adequately. The lateral peritoneum was incised, and the mass with the cecum brought medialward. The mass was located in the wall of the cecum, and an abscess cavity was broken into on reflecting the mass medialward. A fecalith was found in the cavity. Granulation tissue was present also in the cavity. Specimens of the tissue and wall of the abscess were taken for microscopic section. What was thought to be an opening of a diverticulum could be felt in the wall of the cecum. The opening admitted the tip of one's finger.

The pathological report revealed inflammatory tissue with no evidence of malignancy.

The area was drained and the abdomen closed. The postoperative condition was not considered good, but the patient improved; he was discharged on the thirteenth postoperative day.

Case No. 6 (25639): This forty-five year old white male was admitted December 23, 1953 with a history of onset of cramp-like pain in the right lower quadrant thirty hours before admission. Some hours after onset of cramp-like pain a soreness developed in the right lower quadrant which was evident on bending or stooping. On the day of admission there was localization of pain to the right lower quadrant. There was no history of chills, fever, nausea, vomiting or diarrhea. Physical examination revealed temperature 99.4, pulse 70, respirations 18, blood pressure 110/70. On abdominal examination some rigidity and tenderness were found in the right lower quadrant, associated with a firm, tender mass which was slightly movable. The mass was felt to be about the size of a lemon. White blood count was 18,300, with polymorphonuclear leukocytes 66%. The urinalysis was negative. The preoperative diagnosis was acute appendicitis, ruptured or covered with adherent omentum. The abdomen was opened through a McBurney incision. The appendix was normal and was removed. Two diverticula of the cecum were found. One was acutely inflamed and covered with omentum on the anteromedial wall, and the other was benign on the anterolateral wall. The inflamed diverticulum was resected, and the cecum was closed with a double layer of inverting catgut sutures. A third layer of interrupted mattress sutures of cotton was then placed. The benign diver-

ticulum was invaginated into the cecum, and the wall of the cecum closed with interrupted cotton sutures. A cigarette drain was placed to the region of the cecum and the wound closed in layers. The postoperative course was uneventful, and the patient was discharged home on the ninth postoperative day.

Case No. 7 (29435): This is a case of a thirty-nine year old white male with onset of generalized abdominal pain three days before admission on September 9, 1954. The pain localized to the right lower quadrant. There was nausea and vomiting on the day of onset. The appendix had not been removed, and he had had no previous attacks. Physical examination revealed temperature 100.6, pulse 94, respirations 22, blood pressure 130/80. Examination of the abdomen revealed a mass with tenderness in the right lower quadrant, extending toward the flank. On rectal examination tenderness was elicited high on the right side. There were no other abnormalities. White blood count was 12,270, with polymorphonuclear leukocytes 78%, and hemoglobin 81%. Urine showed sugar, and acetone one plus. Preoperative diagnosis was acute appendicitis, probably retrocecal, ruptured, with abscess. The abdomen was opened through a McBurney incision, and a mass was felt behind the cecum. The base of the appendix was identified, and the appendix appeared to pass retrocecaly. A finger was inserted alongside the appendix, and an abscess cavity was broken into; one to two ounces of

thick pus escaped. A large fecalith (larger than the lumen of the appendix) was palpated in the abscess cavity. The appendix was removed in a subserosal manner, and the muscular and mucosal layers did not appear thickened. There was no evidence of rupture, and the subsequent pathological report certainly did not suggest any involvement of the appendix except as periappendiceal inflammatory reaction. The fecalith was broken up and removed. There was a suggestion of a defect in the posterior cecal wall in the abscess cavity. Drains were placed in the abscess cavity, and the abdominal wound was closed. Antibiotics were given, and recovery was uneventful. He was discharged September 26, 1954 with the wound well healed.

COMMENT

Table No. 1 is a summary of the seven cases presented from St. Margaret's Hospital. Analysis of these cases reveals several points of interest. The age distribution ranges from eighteen to fifty-three years. The average age was 38.5 years, which is essentially the same as in previously reported cases. The sex distribution, however, is similar to that of sigmoid diverticulitis, the ratio being two and one-half males to one female. All of the cases were thought to have acute appendicitis preoperatively except one case in which the appendix had been removed previously. Carcinoma of the cecum was strongly considered because the preoperative barium enema showed a filling defect in the wall

CASE	AGE & SEX	PROCEDURE	PRE-OPERATIVE DIAGNOSIS	POST-OPERATIVE DIAGNOSIS	COMPLICATIONS	RESULT	NAUSEA	VOMITING
1	F34	Diverticulectomy	Acute appendicitis	Cecal diverticulitis	None	Cured	O	O
2	M18	Inversion of mass and cecal wall closed. Drainage	Acute appendicitis	Cecal diverticulitis ruptured into epiploicae	None	Cured	O	O
3	F45	Ileocolic resection.	Cancer of cecum	Cecal diverticulitis ruptured with abscess	None	Cured	O	O
4	M36	Cecal wall defect covered with fat. Drainage	Acute appendicitis	Cecal diverticulitis	None	Cured	Slight	O
5	M53	Abscess drained	Acute appendicitis with abscess	Cecal diverticulitis with abscess	None	Cured	Mod.	Mod.
6	M45	1. Diverticulectomy 2. Inversion diverticulum 3. Appendectomy	Acute appendicitis	Cecal diverticulitis	None	Cured	O	O
7	M39	Abscess drained Appendectomy	Acute appendicitis	Ruptured cecal diverticulum with abscess	None	Cured	Mod.	Mod.

TABLE 1

Summary of cases of cecal diverticulitis from Surgery Service of St. Margaret's Hospital, Montgomery, Alabama, 1947-1954

of the cecum. Ileocolic resection was done in this case because the cecal mass found at operation could not definitely be distinguished from a carcinoma. In case No. 6 there were two diverticula present, one of which was acutely inflamed, the other benign. Case No. 7 might easily have been diagnosed as an appendiceal abscess since the distal portion of the appendix was incorporated in the inflammatory mass. This mass was carefully examined, and after the abscess was entered and a large fecalith found, the appendix was removed subserosally; it was clearly demonstrated that no rupture had taken place in the appendix. Vomiting was present in only two of the seven cases; nausea was present in three cases, but in one of these it was very slight. One gets the impression that patients with acute cecal diverticulitis do not appear as ill on admission as do those with acute suppurative appendicitis. This has also been noted by Vaughn and Narsete. The operative procedures consisted of diverticulectomy with appendectomy, closure of cecal wall by suturing a fat pad over the defect and drainage, invagination of the involved cecal wall with purse string suture, ileocecal resection and simple drainage of the abscess. There were no complications in this series, and all patients recovered.

SUMMARY

Seven cases of acute cecal diverticulitis are presented, and some interesting clinical features are discussed. The importance of making a correct diagnosis at the time of surgery is pointed out. A review of 562 x-ray studies of the colon is presented with regard to presence of diverticula and with regard to cecal involvement. The treatment of choice is the simplest procedure which will adequately deal with the situation at hand.

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A good chest x-ray screening program in a general hospital can make possible better medical care, as well as supplying added community service. It will lessen the health hazards to patients and to hospital staff. It will insure better employee health programs. As a resourceful means for the earliest possible detection of unsuspected thoracic disease, it should be a saving for both the hospital and its patients.—*Theodore L. Badger, M. D., Bull. Nat. Tuberc. A., June 1955.*

Tuberculosis is still a communicable disease; isolation in a tuberculosis hospital is an essential factor in tuberculosis control. There is need for hospitalization because many cases of tuberculosis have a positive sputum for many months even with intensive chemotherapy. There is need to evaluate each case on an individual basis, and this can best be done . . . in the hospital in consultation with the thoracic surgeon. There is need for hospitalization during that period when sensitivity of organisms and effectiveness of treatment are being tested.—*Paul S. Phelps, M. D., The John N. Wilson Memorial Lecture, April 30th, 1954.*

ELECTIVE INDUCTION OF LABOR

CRITERIA, METHOD AND COMPARISON BETWEEN INDUCED
AND NON-INDUCED GROUPSSAMUEL B. WITTEN
Captain, USAF (MC)

And

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There has been much discussion in recent obstetrical literature in regard to elective induction of labor with the use of intravenous Pitocin. We would like to report our experience with this procedure, as well as criteria for selection and method of performance. Moreover, we wish to compare our induced with our non-induced cases to determine if we are producing any untoward results.

CRITERIA FOR ELECTIVE INDUCTION OF LABOR

All obstetrical patients were seen every three weeks for the first two trimesters, every two weeks for the seventh and eighth months, and every week of the last month. Problem cases were seen as often as necessary. Pelvic examinations were done on the initial prenatal visit, at eight and one-half months gestation, and on each subsequent visit. Pelvo-encephalograms were done only in cases of questionable cephalo-

pelvic relationships. As a result of careful evaluation the following criteria were developed and applied.

METHOD OF ELECTIVE INDUCTION

Patients who met the criteria were instructed to refrain from breakfast on their next visit, at which time they were admitted to the Obstetrical Ward. After routine preparation they were given three grains of Seconal orally, scopolamine 0.4 mgm. intramuscularly, and were begun on an intravenous infusion of 1:1000 Pitocin in 5% dextrose in distilled water. The drip was begun slowly, about six drops per minute until its effect upon uterine contractions was determined and regulated to produce contractions at three to four minute intervals of 45 to 60 seconds duration. When four to five centimeters cervical dilatation was obtained, the membranes were ruptured artificially if spontaneous rupture had not occurred. Routinely, Demerol 0.1 gm. and scopolamine 0.4 mgm., both by intramuscular injection, were given at four to five centimeters for analgesia. In the occasional case which remained in first stage for more than four hours, we repeated the Demerol and scopolamine in the same dosage. When the patient reached seven to eight centimeters dilatation, the intravenous Pitocin was discontinued in all instances.

If the Pitocin produced no regular contractions or cervical dilatation for three hours and the membranes were not ruptured, the drip was discontinued and the induction considered a failure.

ANESTHESIA FOR DELIVERY

Anesthesia for delivery was variable, with the employment of ether-nitrous oxide, supplemented with pudendal block and saddle block anesthesia. Patient preference was the prime factor in the type of anesthesia used.

ANALYSIS OF CASES

During the period 1 January through 30 September 1954 a total of 361 deliveries was

TABLE I. CRITERIA FOR ELECTIVE INDUCTION
OF LABOR

- A. Maternal
 1. No cephalopelvic disproportion
 2. No history of previous dystocia
 3. No abnormality of prenatal course
 4. Cervical factors
 - a. In primigravida—two centimeters dilatation, full effacement
 - b. In multigravida—two centimeters dilatation, full effacement
 - c. In higher grades of multiparity—less effacement in association with softness and dilatation is permitted
- B. Fetal
 1. No cephalopelvic disproportion
 2. Occiput presentation
 3. Presenting part well engaged in pelvis, at least to level of minus two
 4. Pregnancy at term
 5. Minimum estimated fetal weight of six pounds
 6. If multiple pregnancy
 - a. Presenting fetus must be vertex
 - b. Minimum individual estimated fetal weight of five pounds
- C. Prior agreement of patient to the procedure

From the Obstetric and Gynecologic Service, 2789th USAF Hospital, Brookley Air Force Base, Alabama.

performed. The following cases were excluded from the study: cesarean sections (4), abruptio placentae (1), placenta praevia (3), and those whose records were no longer available (72). The remaining 281 cases were subjected to review.

The established criteria for elective induction were met by 110 (39.1%) of the 281 cases studied. Successful inductions were obtained in 107 (97.2%) of the 110 cases in which elective induction was attempted. The failure rate was therefore 2.8%.

Amniotomy was performed in 64 cases (59.8%) of the induced group, being distributed among 19 primigravidas (17.6%), 17 secundigravidas (15.8%), and 28 multiparas (26.4%). Within the non-induced group amniotomy was performed in 34 cases (19.9%), being distributed among 15 primigravidas (8.7%), 10 secundigravidas (5.8%), and 9 multiparas (5.4%).

TABLE II. COMPARISON OF PRESENTATION AND POSITION BETWEEN INDUCED AND NON-INDUCED GROUP

Type	Induced		Non-Induced	
	Single Preg.	Multiple Preg.	Single	Multiple
Vertex	103 (91.9%)	8 (7.1%)	162 (93.1%)	1 (0.6%)
Occiput anterior	99 (88.3%)	5 (4.5%)	156 (89.6%)	1 (0.6%)
Occiput posterior	4 (3.6%)	3 (2.6%)	6 (3.5%)	0 (0.0%)
Breech	0 (0.0%)	1 (0.9%)	8 (4.6%)	3 (1.7%)
Full breech	0 (0.0%)	1 (0.9%)	4 (2.3%)	1 (0.6%)
Frank breech	0 (0.0%)	0 (0.0%)	3 (1.7%)	2 (1.2%)
Single footling	0 (0.0%)	0 (0.0%)	1 (0.6%)	0 (0.0%)
Total	103 (91.9%)	9 (8.1%)	170 (97.7%)	4 (2.3%)
Grand total	112 (39.2%)		174 (60.8%)	

PRESENTATION AND POSITION

A total of 286 births occurred in the series of 281 cases. A comparison of the induced and non-induced groups of presentation and position in single and multiple births is shown in Table II. It will be noted that the overall distribution of presentation and position in the two groups falls into the expected range, except that there is a lower incidence of breech presentation and a higher incidence of multiple pregnancy in the induced group. The one breech in the induced group was a second twin. The higher incidence of multiple pregnancy is probably due to the fact that patients develop a "ripe" cervix and enter into labor earlier, thus tending to more readily meet maternal criteria for elective induction. It does not appear that elective induction contributed in any way to the production of an unfavorable presentation or position.

TABLE III. COMPARISON OF MATERNAL FACTORS BETWEEN INDUCED AND NON-INDUCED GROUPS

Maternal Factors	Induced	Non-Induced
Cases	110 (39.1%)	171 (60.9%)
Twins, sets	3 (2.7%)	2 (1.2%)
Triplets, sets	1 (0.9%)	0 (0.0%)
Episiotomy	101 (90.9%)	164 (94.0%)
Low forceps	94 (84.6%)	147 (88.2%)
Spontaneous delivery	11 (9.9%)	21 (12.6%)
Puerperal		
perineorrhaphy	4 (3.6%)	6 (3.6%)
First degree lacerations	1 (0.9%)	1 (0.6%)
Second degree lacerations	1 (0.9%)	1 (0.6%)
Third degree lacerations	0 (0.0%)	0 (0.0%)
Postpartal hemorrhage	3 (2.7%)	3 (1.8%)
Prolapse of cord	0 (0.0%)	0 (0.0%)
Forceps rotation	4 (3.6%)	5 (3.0%)
Mid-forceps	0 (0.0%)	4 (2.4%)
Manual removal of		
placenta	4 (3.6%)	3 (1.8%)
Primary for bleeding	1 (0.9%)	1 (0.6%)
Secondary to version	3 (2.7%)	2 (1.2%)
Version and extraction		
For multiple preg-		
nancy	3 (2.7%)	2 (1.2%)
Cervical lacerations	2 (1.8%)	5 (3.0%)
Maternal morbidity	0 (0.0%)	0 (0.0%)
Maternal mortality	0 (0.0%)	0 (0.0%)

MATERNAL FACTORS

A study of certain maternal factors in the two groups as outlined in Table III shows no significant difference. Several interesting facts emerge which may be elaborated upon.

Manual removal of the placenta was increased in the induced group because of its use with version and extraction, this procedure being frequently employed because of the increased incidence of vertex presentation of the second twin within the induced group. The comparison between the groups for manual removal for hemorrhage or other indications was favorable. There were no mid-forceps deliveries in the induced group, a result of special care to avoid cephalopelvic disproportion. Cervical lacerations were more common in the non-induced group. There was no maternal morbidity or mortality in either group.

The use of elective induction of labor did not in any way increase maternal complications of delivery.

FETAL FACTORS

A study of certain fetal factors in the two groups as outlined in Table IV shows no significant difference. Several interesting factors emerge which may be elaborated upon.

TABLE IV. COMPARISON OF FETAL FACTORS
BETWEEN INDUCED AND NON-INDUCED
GROUPS

Fetal Factors	Induced	Non-Induced
Total births	112	174
Total live births	112 (100%)	173 (99.4%)
Total stillbirths	0 (0.0%)	1 (0.6%)
Premature births	4 (3.6%)	10 (6.0%)
Single births	0 (0.0%)	8 (4.8%)
Multiple births	4 (3.6%)	2 (1.2%)
Premature labor	0 (0.0%)	1 (0.6%)
Fetal deaths	0 (0.0%)	2 (1.2%)
Premature deaths	0 (0.0%)	1 (0.6%)
Intrapartal deaths	0 (0.0%)	0 (0.0%)
Neonatal deaths	0 (0.0%)	1 (0.6%)
Erythroblastosis fetalis	1 (0.9%)	0 (0.0%)
Erythroblastosis deaths	0 (0.0%)	0 (0.0%)
Tracheal		
catheterizations	3 (2.7%)	4 (2.4%)
Birth injuries	0 (0.0%)	0 (0.0%)
Total morbidity	0 (0.0%)	0 (0.0%)

There were four (3.6%) prematures in the induced group, only two of which were below five pounds, and all were siblings of multiple pregnancies. In comparison, premature babies resulted in eight single births and two multiple births in the non-induced group, a total of ten (6.0%).

The only premature death occurring in the non-induced group was due to premature labor at 31 weeks gestation. The fetus lived seven hours. There was no morbidity or mortality among the induced prematures. One neonatal death occurred in the non-induced group after 30 hours in a full-term, seven pound fetus. An autopsy revealed the cause of death to be endocardial fibroelastosis. The one erythroblastotic baby was born to an Rh negative gravida three whose blocking antibody titer rose to 1:2064 prior to delivery. Exchange transfusion with O-negative blood was done in the delivery room and the baby has been well since. There were no birth injuries or fetal morbidity in either group.

The use of elective induction of labor did not in any way increase fetal complications of delivery.

BIRTH WEIGHTS

There were 112 induced and 174 non-induced births. Within the 103 induced single births, no infants weighed less than 5½ pounds, and only eight infants were less than six pounds. Correspondingly, of the 170 non-induced single births thirty infants weighed less than six pounds, fifteen of which were less than 5½ pounds.

Of nine induced multiple births, three sets of twins and one set of triplets, two siblings weighed less than five pounds, a sibling twin, 3 pounds 11 ounces and a sibling triplet 4 pounds 11 ounces. Of the four non-induced multiple births, two sets of twins were non-induced, of which two siblings were 4 lbs. 2 ounces and 4 lbs. 15 ounces.

These facts substantiate our judgment in fulfillment of our criteria and show that in properly selected cases elective induction of labor does not promote prematurity.

TABLE V. DURATION OF LABOR—ANALYSIS OF
FIRST STAGE OF LABOR IN HOURS

	Induced					
	Primigrav. Art.	Spont.	Secundigrav. Art.	Spont.	Multipara Art.	Spont.
Mean	4.7	5.1	3.8	4.1	3.3	3.2
Median	3.7	5.0	3.3	4.2	2.8	2.8
Range	5-14	1-12	1-8	1-7	5-8	1-8

	Non-Induced					
	Primigrav. Art.	Spont.	Secundigrav. Art.	Spont.	Multipara Art.	Spont.
Mean	11.4	7.9	9.0	6.1	7.4	5.8
Median	10.5	8.4	5.5	5.6	7.2	5.1
Range	4-19	2-24	1-24	2-11	3-12	1-11

Reference to Table V compares the groups in regard to duration of first stage of labor. It is apparent that in the induced group all subdivisions had a shorter first stage than their comparable subdivisions in the non-induced group. This is most striking in induced primigravidas whose membranes were ruptured artificially, being in first stage about one-third of the time of the non-induced primigravidas, whose membranes ruptured artificially. The same is true of secundigravidas and multiparas whose membranes were ruptured artificially, as compared to their comparable non-induced subdivisions, being in labor somewhat less than half the time. In comparison of the subdivisions whose membranes ruptured spontaneously, the difference is less, although still in favor of the induced group. An interesting fact which is seen, incidentally, is that within the non-induced group all subdivisions whose membranes were ruptured artificially were in first stage longer than those in which the membranes ruptured spontaneously.

The above observations are further demonstrated in regard to comparison of medians and ranges, showing essentially the same conditions.

TABLE VI. ANALYSIS OF SECOND STAGE OF LABOR IN MINUTES

	Induced					
	Primigrav.		Secundigrav.		Multipara	
	Art.	Spont.	Art.	Spont.	Art.	Spont.
Mean	24.8	36.0	20.7	25.8	13.9	18.2
Median	22.5	33.8	24.0	26.7	12.3	13.2
Range	10-53	10-98	8-42	10-50	8-32	10-84

	Non-Induced					
	Primigrav.		Secundigrav.		Multipara	
	Art.	Spont.	Art.	Spont.	Art.	Spont.
Mean	31.5	41.5	12.0	23.3	15.8	17.8
Median	29.0	30.5	12.6	22.5	16.5	15.7
Range	15-68	10-110	10-37	10-53	2-27	10-43

Reference to Table VI compares the groups in regard to duration of second stage of labor. Again, it is seen that in primi-gravidas second stage, in both subdivisions, was shorter in the non-induced group. Secundigravidas which were induced, how-ever, had slightly longer second stages, al-though this difference is not significant. The multiparas in both groups were essen-tially comparable. In both groups, in all subdivisions, those whose membranes were ruptured artificially were in second stage longer than those whose membranes rup-tured spontaneously.

The analysis of medians and ranges fur-ther confirms these observations.

TABLE VII. ANALYSIS OF THIRD STAGE OF LABOR IN MINUTES

	Induced					
	Primigrav.		Secundigrav.		Multipara	
	Art.	Spont.	Art.	Spont.	Art.	Spont.
Mean	4.3	3.0	3.9	3.1	3.5	2.9
Median	3.5	2.9	3.5	2.8	2.7	2.7
Range	to 12	to 15	to 10	to 7	to 22	to 8

	Non-Induced					
	Primigrav.		Secundigrav.		Multipara	
	Art.	Spont.	Art.	Spont.	Art.	Spont.
Mean	3.8	4.1	2.5	4.1	2.5	4.2
Median	3.5	3.3	2.5	3.2	2.5	3.6
Range	to 9	to 23	to 5	to 18	to 5	to 12

Reference to Table VII compares the groups in regard to duration of third stage of labor. Between the groups, in all sub-divisions, the results are essentially com-parable, with no significant differences be-tween them.

In this series, the use of elective induc-tion of labor did not in any way produce an unfavorable result in regard to the duration of the stages of labor. To the con-trary, there has been a marked decrease,

especially of the first stage of labor, within the induced group.

FAILURES OF INDUCTION

Of 110 attempted elective inductions, we failed in three (2.8%). These patients, two primigravidas and one gravida five, met all criteria. Because labor was not established with the Pitocin drip, membranes were not ruptured. After discontinuation of the drip, from a minimum of four to a maximum of nine hours all spontaneously went into labor, with five to twelve hour first stages, and all delivered viable infants unevent-fully. The postpartal courses were normal in all respects.

Our failures of elective induction show that our attempts in no way produced any adverse effects. We would emphasize again that in cases of elective induction care be taken that patients be in active labor and making progress before membranes are artificially ruptured.

COMMENT

Several factors contributed to our under-taking of elective induction of labor; name-ly, the proximity of the obstetrical clinic to the delivery unit, the presence of the phy-sician with the patient at all times, and the professional competence of the obstetrical nursing service. We do not have any pref-erence for elective induction; in fact, we believe that most physicians should await spontaneous onset of labor. However, we have shown that in capable hands elective induction can be practiced beneficially.

We admit that, by use of our criteria, many will feel that our patients were in reality in very early labor. Under the present confines of our study we cannot refute them. However, in several patients who met other criteria but refused elective induction, labor did not supervene for up-wards of 72 hours. We intend at some future date to attempt another study in which half the patients who meet our cri-teria are allowed to await spontaneous onset of labor and half electively induced, for comparison. In any event, we have, by our selection and elective induction, produced the onset of labor and delivery at a time of our own choosing.

Of all points of caution, we believe that the most important is abstention from arti-ficial rupture of membranes before certain establishment of labor. We feel that this is in great measure aided in production of our

acceptable results. Incidentally, we prefer a dura hook guided by a finger for amniotomy.

Of interest are the number of reports which have recently appeared in regard to elective induction of labor. Large series, with excellent results and with detailed descriptions of methods, are becoming more frequent.¹⁻⁶ It is hoped that this paper will further contribute to the edification of those who wish to explore this problem.

SUMMARY

1. Elective induction of labor with intravenous Pitocin, together with criteria for selection and method, are reported in 110 cases, with 97.2% success.

2. A comparison between induced and non-induced patients is made, showing no untoward maternal or fetal results.

3. Duration of labor was considerably decreased by this method.

4. In three failures of elective induction, there were no untoward results.

5. We believe that elective induction of labor in properly selected cases may be safely performed.

(The authors express their appreciation to Colonel James W. Humphreys, Jr., USAF (MC) for his invaluable critique, and to Mrs. Estelle Deakle, RN for her administrative assistance.)

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New A. M. A. Drug Evaluation Program Outlined—A new program to give physicians timely information on the usefulness and safety of new drugs has been announced by the Council on Pharmacy and Chemistry of the American Medical Association.

The council's announcement in the July 30 *Journal of the American Medical Association*, is the first in a series by A. M. A. councils on programs inaugurated to replace various "seal-acceptance" activities discontinued in February.

The council will examine available published and unpublished evidence relating to the actions, uses, dosages, hazards, and other properties of drugs. It will not conduct clinical and laboratory tests. Reports of these evaluations will be published for the information of the medical profession.

For many years A. M. A. councils have evaluated products used by physicians and the public. In those programs, council seals were awarded to manufacturers and distributors of drugs, foods, devices, and cosmetics that met acceptance requirements.

"The evaluation of a multitude of individual brands, rather than classes of products, became so time-consuming that it threatened to interfere with the broader aspects of the council programs," an accompanying *Journal* editorial said. "... new and more effective programs are being adopted by the scientific councils—programs that do not require the inspection of individual products or the issuance of seals."

The report by the Council on Pharmacy and Chemistry said:

"There is an increasing demand from the medical profession in general for concise and timely reports that contain an authoritative, unbiased evaluation of new therapeutic agents. . . . In this present era of rapid new developments in therapeutics, the work involved in processing for acceptance many different brands of a drug became cumbersome and time-consuming to the extent that physicians could no longer be provided with the type of service they desired.

"Under the new program drugs will be evaluated at the earliest possible opportunity in order to serve the best interests of the profession. As a rule the greatest interest in a new drug occurs at the time it is introduced on the market for general use. This is also the time when there is the most need for an unbiased report containing information that will aid physicians in judicious or proper use of such medication."

Pharmaceutical firms have been invited to cooperate with the council by forwarding complete data and reports of all laboratory and clinical investigations relating to new drugs so evaluation reports may be made at the earliest possible time.

After council members and other recognized experts have considered the scientific clinical and laboratory evidence, evaluation reports will be published in the *Journal of the A. M. A.* and in the council's annual publication, *New and Nonofficial Remedies*. Firms will be given an opportunity to comment on the reports before publication and due consideration will be given to their comments.

NEXT ANNUAL MEETING
BIRMINGHAM
APRIL 19, 20, 21, 1956

Child's Stomach Trouble May Be Emotional—Children have stomach ulcers and other internal disorders caused by emotional factors just as adults do, according to two staff members of the Children's Mercy Hospital, Kansas City, Mo.

Emotions "bottled up" may express themselves by appearing as real physical illnesses—peptic ulcer, ulcerative colitis, "stomach cramps," "knots in my stomach," and a variety of other ailments.

Many cases of infantile colic also are thought to be largely emotional in origin, A. H. Chapman, M. D., and Dorothy G. Loeb, M. A., said in the June American Journal of Diseases of Children, published by the American Medical Association.

Sometimes such disorders can be cleared up fairly rapidly through a talk between the parents and the doctor. "A small amount of extra time" to talk to the parents is often the best treatment the physician can give, they said.

Many of these illnesses begin because children and infants fail to receive sufficient love or are surrounded by an atmosphere of irritability, impatience, and anger.

"Infantile colic" frequently develops in infants whose mothers are impatient and cross. The infant "senses the absence of secure, affectionate mothering, which is his most crucial need," the authors said.

Sometimes he expresses his sense of insecurity by becoming "colicky." More affectionate and patient mothering is often the best remedy, the authors said.

Peptic ulcers may develop in children whose needs for security and love were not met in infancy.

Children who have ulcerative colitis often are depressed and unable to express their angry feelings. These children also may not have had enough affection from their mothers. It has been estimated that about 10 per cent of all adult ulcerative colitis begins in childhood.

Once the doctor recognizes the emotional basis of these illnesses, he can attempt to guide the parents in their approach to the child's problem and illness. The physician not only can give medical treatment, but can make specific suggestions for the behavior of the child and his parents.

Easter Chicks Carry Stomach Infection—An unusual outbreak of a stomach and intestinal infection caught from Easter chicks is reported in the July 30 Journal of the American Medical Association.

The infection, caused by a bacterium, *Salmonella typhimurium*, is common in chicks and other poultry. It is being more frequently reported among humans, according to Arnold S. Anderson, M. D., Henry Bauer, Ph. D., and C. B. Nelson, M. D., Minneapolis. They said the reported outbreak indicates "a potential hazard" in distributing chicks or other small poultry as household pets.

Twelve cases of salmonellosis in 11 households in Hennepin County, Minn., were definitely traced to chicks which were distributed at Easter, 1954, by two food stores.

The chicks were obtained from a hatchery which had no record of infection. However, while at the stores, the chicks were crowded and were fed cereal from broken packages.

No attempt was made to question all persons who received the chicks, but 17 other persons in the 11 households showed symptoms and probably had cases of salmonellosis.

The illness began from four to six days after chicks were taken home. The symptoms, including fever, watery diarrhea, blood in the stools, and vomiting, came on suddenly and lasted from one to five days. Treatment consisted of the usual antidiarrheal drugs and diet and antibiotics.

The 12 patients ranged in age from four months to 35 years. Six were infants under one year of age.

The infection is usually mild in children over the age of two and in adults, but so severe in infants less than a year old that medical help is necessary, the doctors said.

The authors explained how tiny infants, who live "in scrupulously clean cribs and seldom have anything go into their mouths that is not sterilized," get salmonellosis.

The answer is in the behaviour of the two to five-year-old, who handles his pets and then touches the mouth of his baby brother or sister. "It may be mere chance, but we suspect it is not," that every patient under one year had a brother or sister between the ages of two and five, the authors said.

Two World Medical Groups Discussed—Since health is of importance to everyone in the world, international cooperation in health and medicine may smooth the way for cooperation in more controversial spheres, three physicians said recently.

Two organizations which work toward world health, understanding, and peace—the World Medical Association and the World Health Organization—are described in the July 30 Journal of the American Medical Association.

Drs. Harold S. Diehl, Minneapolis, Leonard W. Larson, Bismarck, N. D., and Franklin D. Murphy, Lawrence, Kan., said the two groups are "a team that is making one of the greatest contributions of our time to the improvement of mankind—a must for the prevention of the spread of communism."

An accompanying editorial pointed out the importance of the organizations as a means of exchanging information.

"Each country, of course, has its own problems, but there are many aspects of the control of disease and the providing of medical care that should be viewed internationally," the editorial said. "Sometimes the view prevailing in one country is helpful when disseminated elsewhere . . . Such value is readily apparent to everyone."

"Not so apparent at times is the protection a country receives when its health professions can benefit from mistakes made elsewhere."

Free exchange of information not only can show a country how to control malaria and other diseases, but can point to the "inequities of some governmentally inspired schemes that may not bring health, happiness, and freedom but instead shackles and misery," the editorial said.

THE JOURNAL

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HEALTH INSURANCE AT RECORD HIGH

Nearly two out of every three men, women, and children in the United States now are protected by voluntary health insurance. The Health Insurance Council announced this recently in releasing the findings of its ninth annual survey of health insurance in America, as of December 31, 1954.

"This survey shows," said Council Chairman John H. Miller, "that many more Americans now have more and better health insurance than ever before. Measured in terms of benefits paid out by insuring organizations in 1954, striking progress was made during the year. And the survey figures indicate continuing progress at rapid rates for the foreseeable future."

Mr. Miller estimates that very shortly some 104 million persons will have voluntary health insurance against hospital expenses. About 89 million people will have surgical expense protection, and 50 million will have regular medical expense protection. These figures are based on conservative projections of the 1954 year-end data presented in the survey, Mr. Miller said.

The total of benefit payments on health insurance claims reported by the survey for 1954 exceeded \$2.7 billion, a gain of 11% over the previous year. Of the total amount, more than half went to help meet the hospitalization expenses of beneficiaries, and more than \$730 million went for surgery and medical care. Benefit payments to policyholders by insurance companies for loss of income due to disability totalled in excess of half a billion dollars last year, the survey reports.

Of the aggregate benefit payments in 1954 by all forms of voluntary health insurance, 56% of the total came from the insurance companies. The dollar amount paid by the companies was over \$1.5 billion, including loss-of-income benefits.

Blue Cross and Blue Shield type plans paid more than \$1 billion, or 39% of the total. Various independent plans accounted for the remaining 5% of the total.

On December 31, 1954, the date as of which the survey was made, a total of 101,493,000 Americans had hospital expense protection. This represents an increase of 4.3% during that year, a rate of increase which is over 2½ times the rate of population growth in the same period. Since the

beginning of 1941, the number of persons with hospital expense protection has multiplied nearly $8\frac{1}{2}$ times.

Nearly 86 million persons had surgical expense protection by the end of 1954. This represents an increase of 6.1% over the previous year. Ordinarily, people with surgical coverage also have hospitalization protection. So, up to 85% of those with hospital expense protection also had surgical coverage—up from a figure of 83% one year earlier. Since 1941, the number of persons with surgical insurance has multiplied about 16 times.

Regular medical expense coverage increased by more than four million persons, or nearly 11% during 1954, to give a total of more than 47 million who have this protection against the cost of non-surgical medical care by their doctors. People with medical expense protection usually have hospital and surgical protection as well.

A total of nearly 39 million workers had protection at the close of 1954 against loss of income due to disability. This figure represents about 60% of the total civilian labor force in the nation at the time.

The newest form of voluntary health insurance—major medical expense insurance—is shown by the survey to protect more than 2.2 million persons against the costs of catastrophic illness. This figure represents a gain of 83% during last year.

Major medical expense insurance, the Council points out, not only goes beyond customary policies and plans in protecting against heavy hospital and doctor bills, but it also protects against almost all other types of medical expense due to disability, including the costs of special duty nursing, artificial limbs and appliances, and drugs and medicines.

The Health Insurance Council consists of nine associations in the insurance business. These associations are in turn made up of companies providing the various forms of protection against hospital, surgical and medical costs and loss of income due to disability. These companies provide most of the health insurance issued by insurance companies in the United States.

The Council has been set up by the insurance business to function as a central source for practical and technical assistance to medical associations and hospital administrators in connection with the development and use of accident and health

benefits, and as a central source of information concerning this type of insurance.

The Council's members are: American Life Convention, American Mutual Alliance, Association of Casualty and Surety Companies, Association of Life Insurance Medical Directors, Bureau of Accident and Health Underwriters, Health and Accident Underwriters Conference, International Claim Association, Life Insurance Association of America, and Life Insurers Conference.

The Council's Survey Committee developed the statistics on health insurance coverage and drafted the survey report. Chairman of the Survey Committee is Henry D. Locke, vice president of Liberty Mutual Insurance Company.

Organizations surveyed in the Council's report include insurance companies, Blue Cross, Blue Shield, and various independent plans sponsored by business and industry, by employee benefit associations, and by private group clinics. Basing its study mainly on responses to questionnaires sent these insuring organizations, the Health Insurance Council each year compiles data on the extent of voluntary health insurance coverage in the United States.

ALABAMA ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS

The Alabama Association of Obstetricians and Gynecologists will hold its fall meeting in Birmingham at the Tutwiler Hotel on October 13, 1955, beginning at 9:30 AM. The guest speaker will be William S. Kroger, M. D., who has written much on psychosomatic obstetrics and gynecology. That will be the topic he will discuss that day. He will also show a sound color film, "Hypnosis in Obstetrics."

The program will also include papers by Alabama obstetricians and gynecologists. It is planned to have round table discussions, at a luncheon, on various topics of interest. A panel discussion is planned on "Pelvic Conditions Simulating Gynecologic Disease." It is felt that this program should not be limited to members of the Association only. Other doctors desiring to attend are invited and are requested to notify the Secretary so that arrangements can be made. A small registration fee will be charged.

The Secretary of the Association is James H. French, M. D., 927 Bell Building, Montgomery.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

PAUSE AND THINK

W. A. Dozier, Jr.

Director of Public Relations

From time to time this column has been concerned with the political thinking and economic tendencies in this country. It is firmly believed that the sounder thinking people are our only hope if this nation is to progress. It is further believed that until we get on a financial basis which is in accord with simple arithmetic and in accord with the thinking of business men relative to debts, we are on perilous ground.

The Southern States Industrial Council is concerned over the whole picture, and through its *Bulletin* keeps the situation before its members. Part of an editorial in the July 1, 1955 issue of this publication warrants reprinting. It is done with an admonition that you pause and think. After pointing out the fact that we seem afraid to stop a number of programs which look harmful to the editor, he makes the following statements.

"Have we grown soft in this nation? Are we losing our moral courage? For these are moral questions—whether we realize it or not.

"There is one thing that history tells us for sure—that no nation has long remained great and prosperous under a continuously unbalanced budget, an overpowering national debt, and an irredeemable currency. Surely, we cannot blind ourselves to the fact that all three of these elements have been with us for better than a score of years. We have incurred deficit financing for twenty-three of the last twenty-six years. Our national debt has been constantly growing. And we have not had an honest dollar since we went off the gold standard in 1933.

"It is this last element that lies at the heart of our troubles. This is a moral question, too. When our Government went off the gold standard in 1933, it violated sanctity of contract and broke its pledged promise to the people. It, in effect, robbed the thrifty of 42% of their savings.

"Since then, the whole tendency in our

Government has been to penalize thrift and subsidize laziness.

"Since then, a dollar has been a piece of paper that is a dollar simply because the Government says it is a dollar; it has no tangible value back of it.

"Since then, the control of our currency has passed out of the hands of the people, where it belongs, and into the hands of the politicians, where it does not belong.

"Since then, a foreigner holding our currency has been able to demand and receive gold in exchange—something that American citizens, who earned and owned the gold in the first place, cannot do.

"Since then, the amount of funds available to the politicians has been limited only by their desire to spend—for whatever purpose.

"But we are afraid to go back to a sound currency—even though we should know that until we do there is no way of stopping the trend that, if continued, will eventually destroy us."

It is high time for us to pause and think.

Physician Licensing Reaches New High—The number of new physicians added to the nation's physician population reached a record high in 1954, according to figures released recently by the American Medical Association Council on Medical Education and Hospitals.

Boards authorized to license physicians to practice gave 15,029 licenses during the year, an increase of 595 over the previous year. Excluding duplications of candidates examined in more than one state, the actual total of new license holders reached 7,917.

The report said that deducting the 3,667 physician deaths in 1954, there remained 4,250 new physicians in practice since the beginning of the year. This was 641 more physicians than were added to the population in 1953.

The council's report appeared in the May 28 Journal of the A. M. A. It said that the physician population increase occurred in 31 states. The licenses issued brought to 222,773 the total of licenses granted since 1935.

Registration of physicians (including persons licensed in 1954, who took exams in previous years) reached a level exceeded only by that of 1946, the all-time record year. From 1946 to 1952, the numbers registered decreased annually and then took an upswing. However, throughout all these years the totals were higher than in the pre-World War II years.

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1955

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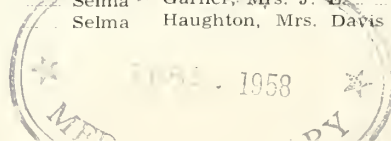
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Coleman, Mrs. W. E. Birmingham
Collier, Mrs. S. W. Birmingham
Comer, Mrs. J. F. Birmingham
Conwell, Mrs. H. E. Birmingham
Cooley, Mrs. B. S., Jr. Birmingham
Cooley, Mrs. H. N. Birmingham
Copeland, Mrs. M. A. Birmingham
Coston, Mrs. R. M. Birmingham
Cotten, Mrs. H. B. Birmingham
Coyle, Mrs. D. J. Birmingham
Crandall, Mrs. H. L. Birmingham
Crenshaw, Mrs. J. T. Birmingham
Crow, Mrs. C. B. Birmingham
Cunningham, Mrs. W. A. Birmingham
Dabney, Mrs. M. Y. Birmingham
Davis, Mrs. J. A., Jr. Birmingham
Davis, Mrs. J. E. Leeds

Dawson, Mrs. L. M. Birmingham
Deaver, Mrs. C. W. Birmingham
Denton, Mrs. R. C. Birmingham
Doggett, Mrs. W. E., Jr. Birmingham
Donald, Mrs. C. J., Jr. Birmingham
Donald, Mrs. J. M. Birmingham
Donald, Mrs. W. D. Birmingham
Donovan, Mrs. Barbara Birmingham
Douglas, Mrs. Gilbert, Jr. Birmingham
Durrett, Mrs. J. J. Birmingham
Eddleman, Mrs. E. E. Birmingham
Edwards, Mrs. E. H. Leeds
Edwards, Mrs. H. P. Birmingham
Edwards, Mrs. W. S. Birmingham
Elliott, Mrs. H. R., Jr. Birmingham
Elmore, Mrs. J. D. Birmingham
Fargason, Mrs. C. C. Birmingham
Farmer, Mrs. H. R. Birmingham
Ferguson, Mrs. Hal Birmingham
Freeman, Mrs. A. M. Birmingham
Funderburg, Mrs. L. W. Birmingham
Gaines, Mrs. C. D. Birmingham
Gaines, Mrs. H. F. Birmingham
Givhan, Mrs. E. G., Jr. Birmingham
Glasgow, Mrs. R. D. Birmingham
Goldner, Mrs. Harry Birmingham
Goodall, Mrs. Gordon Birmingham
Goodman, Mrs. Seaburt Birmingham
Gordon, Mrs. G. R. Birmingham
Grady, Mrs. R. W. Birmingham
Graham, Mrs. S. E. Birmingham
Grant, Mrs. C. P. Birmingham
Green, Mrs. R. C. Birmingham
Guthrie, Mrs. R. F. Birmingham
Habeeb, Mrs. Alfred Birmingham
Hamrick, Mrs. R. A. Birmingham
Hankins, Mrs. G. M. Birmingham
Hardy, Mrs. J. P. Birmingham
Hargis, Mrs. E. H. Birmingham
Harris, Mrs. E. A. Birmingham
Harris, Mrs. Reuben Birmingham
Harrison, Mrs. T. R. Birmingham
Harsh, Mrs. Griffith Birmingham
Hawley, Mrs. W. L. Birmingham
Henderson, Mrs. H. H., Jr. Birmingham
Herren, Mrs. W. S. Birmingham
Hicks, Mrs. J. J. Birmingham
Hitchcock, Mrs. Philip Birmingham
Hobbs, Mrs. R. J. W. Birmingham
Hofammann, Mrs. K. E. Birmingham
Holcomb, Mrs. M. C. Birmingham
Holley, Mrs. H. L. Birmingham
Hood, Mrs. J. R. Birmingham
Howe, Mrs. C. D. Birmingham
Howe, Mrs. E. H. Birmingham
Hudson, Mrs. H. C. Birmingham
Hughes, Mrs. B. A. Birmingham
Hughes, Mrs. O. F. Birmingham
Humphries, Mrs. J. M. Birmingham
Irwin, Mrs. W. H. Leeds
Jenkins, Mrs. J. F., Jr. Birmingham
Johnston, Mrs. E. R. Birmingham
Jones, Mrs. W. H. Birmingham
Jordan, Mrs. J. S. Birmingham
Joseph, Mrs. K. N. Birmingham
Kartus, Mrs. Sam Birmingham
Kay, Mrs. F. A. Birmingham
Kelly, Mrs. S. J. Birmingham
Kennedy, Mrs. Hughes, Jr. Birmingham
Kennedy, Mrs. Hughes, III Birmingham
Kent, Mrs. J. E. Birmingham
Kessler, Mrs. C. R. Birmingham
Kincannon, Mrs. L. T. Birmingham
Kinkead, Mrs. K. J. Birmingham
Kirby, Mrs. J. L., Jr. Birmingham
Kirby, Mrs. L. E. Birmingham
Knight, Mrs. J. H. Birmingham
Lawrence, Mrs. W. E. Birmingham
Lewis, Mrs. A. G. Birmingham
Lewis, Mrs. C. F. Birmingham

Lewis, Mrs. H. J.	Birmingham	Simon, Mrs. H. E.	Birmingham
Lewis, Mrs. T. K.	Birmingham	Siniard, Mrs. E. C.	Birmingham
Linder, Mrs. Hugh	Birmingham	Slaughter, Mrs. J. M.	Birmingham
Lineberry, Mrs. E. D.	Birmingham	Smelo, Mrs. L. S.	Birmingham
Linn, Mrs. J. E.	Birmingham	Smith, Mrs. G. H.	Birmingham
Livingston, Mrs. W. K.	Birmingham	Smith, Mrs. G. H., Jr.	Birmingham
Love, Mrs. J. T.	Birmingham	Smith, Mrs. H. J.	Birmingham
Lowrey, Mrs. D. B.	Birmingham	Smith, Mrs. R. J.	Birmingham
Lyons, Mrs. Champ	Birmingham	Snow, Mrs. R. L., Jr.	Birmingham
Maddox, Mrs. W. A.	Birmingham	Sparks, Mrs. D. H.	Birmingham
Martin, Mrs. W. B.	Birmingham	Speir, Mrs. R. C.	Birmingham
Mason, Mrs. J. M., III	Birmingham	Stanton, Mrs. R. F., Jr.	Birmingham
May, Mrs. R. M.	Birmingham	Stayer, Mrs. Glenn	Birmingham
McCarley, Mrs. J. T., Jr.	Birmingham	Stigler, Mrs. S. L.	Birmingham
McCarn, Mrs. O. C., Jr.	Birmingham	Strickland, Mrs. J. T.	Birmingham
McCoy, Mrs. W. C.	Birmingham	Sweeney, Mrs. D. B.	Birmingham
McCullough, Mrs. G. C.	Birmingham	Talley, Mrs. D. F.	Birmingham
McDonald, Mrs. H. J.	Birmingham	Teague, Mrs. E. B.	Birmingham
McLallen, Mrs. C. D., Jr.	Birmingham	Terhune, Mrs. S. R.	Birmingham
McLester, Mrs. J. B.	Birmingham	Thomas, Mrs. H. H.	Birmingham
Meadors, Mrs. J. L.	Birmingham	Thompson, Mrs. H. J.	Birmingham
Meadows, Mrs. J. A., Sr.	Birmingham	Thompson, Mrs. W. D.	Trussville
Meadows, Mrs. J. A., Jr.	Birmingham	Thuss, Mrs. W. G., Sr.	Birmingham
Mears, Mrs. T. W.	Birmingham	Tourney, Mrs. R. L.	Birmingham
Moody, Mrs. W. E.	Birmingham	Trucks, Mrs. J. F.	Birmingham
Moore, Mrs. E. L.	Birmingham	Truss, Mrs. C. O.	Birmingham
Moore, Mrs. J. G.	Birmingham	Tyler, Mrs. R. E.	Birmingham
Morgan, Mrs. J. M., Jr.	Birmingham	Underwood, Mrs. J. W.	Birmingham
Morgan, Mrs. P. A., Jr.	Birmingham	Vesely, Mrs. D. G.	Birmingham
Morris, Mrs. H. B.	Birmingham	Viari, Mrs. W. N.	Birmingham
Morton, Mrs. B. F.	Birmingham	Wainwright, Mrs. S. P.	Birmingham
Mowry, Mrs. R. W.	Birmingham	Waldo, Mrs. F. B.	Birmingham
Naramore, Mrs. M. L., Jr.	Birmingham	Walker, Mrs. J. H.	Birmingham
Nelson, Mrs. J. H.	Birmingham	Ward, Mrs. J. A.	Birmingham
Neville, Mrs. C. W.	Birmingham	Ward, Mrs. J. K.	Birmingham
Newfield, Mrs. S. U.	Birmingham	Warrick, Mrs. G. W.	Birmingham
Noojin, Mrs. Ray	Birmingham	Warrick, Mrs. W. D.	Birmingham
O'Dell, Mrs. J. W.	Birmingham	Weaver, Mrs. J. A.	Birmingham
Paine, Mrs. T. F.	Birmingham	Weir, Mrs. H. M.	Birmingham
Patton, Mrs. T. B.	Birmingham	Welden, Mrs. J. E.	Birmingham
Paul, Mrs. T. O.	Birmingham	Wells, Mrs. C. N.	Birmingham
Paull, Mrs. B. P.	Birmingham	West, Mrs. O. T.	Birmingham
Perley, Mrs. A. I.	Birmingham	White, Mrs. D. A., Jr.	Birmingham
Perry, Mrs. E. B.	Birmingham	Williamson, Mrs. Byrn	Birmingham
Peterson, Mrs. E. J.	Birmingham	Wilson, Mrs. C. H.	Birmingham
Pfeiffer, Mrs. R. B.	Birmingham	Wilson, Mrs. Frank	Birmingham
Pinkerton, Mrs. H. A.	Birmingham	Wiygul, Mrs. C. H.	Birmingham
Pitts, Mrs. E. B.	Birmingham	Woodall, Mrs. P. S.	Birmingham
Porter, Mrs. C. E.	Birmingham	Woodall, Mrs. W. M., Jr.	Birmingham
Prescott, Mrs. J. L.	Birmingham	Woods, Mrs. A. W.	Birmingham
Prescott, Mrs. W. E., Jr.	Birmingham	Word, Mrs. Buford	Birmingham
Ragsdale, Mrs. M. C.	Birmingham	Wright, Mrs. D. O.	Birmingham
Ramsey, Mrs. J. H.	Birmingham	Yelton, Mrs. C. L.	Birmingham
Randall, Mrs. F. M.	Birmingham	Yoe, Mrs. Robert	Birmingham
Reque, Mrs. P. G.	Birmingham		
Richard, Mrs. L. S.	Birmingham		
Riser, Mrs. A. B.	Birmingham		
Riser, Mrs. W. H., Jr.	Birmingham		
Risman, Mrs. G. C.	Birmingham		
Ritchey, Mrs. H. M.	Birmingham		
Roberts, Mrs. J. A.	Birmingham		
Robertson, Mrs. B. O., Jr.	Birmingham		
Robinson, Mrs. E. B.	Birmingham		
Rose, Mrs. J. W.	Birmingham		
Ross, Mrs. G. L.	Birmingham		
Rosser, Mrs. W. J.	Birmingham		
Rountree, Mrs. W. B.	Birmingham		
Royal, Mrs. Arnold	Birmingham		
Rubin, Mrs. M. B.	Birmingham		
Rucker, Mrs. E. W.	Birmingham		
Russell, Mrs. R. O.	Birmingham		
Salter, Mrs. P. P., Jr.	Birmingham		
Sanders, Mrs. E. H.	Birmingham		
Secor, Mrs. R. C.	Birmingham		
Sewell, Mrs. J. W.	Birmingham		
Shafferman, Mrs. Sam	Birmingham		
Shannon, Mrs. P. W.	Birmingham		
Sherer, Mrs. R. J.	Birmingham		
Sherrod, Mrs. H. L.	Birmingham		

JEFFERSON—BESSEMER

Bell, Mrs. P. H.	Bessemer
Blue, Mrs. D. R.	Bessemer
Blue, Mrs. J. H.	Bessemer
Brooke, Mrs. J. P.	Bessemer
Cale, Mrs. R. T.	Bessemer
Colquitt, Mrs. C. J.	Bessemer
Davidson, Mrs. A. W.	Bessemer
Denson, Mrs. F. H.	Bessemer
Ford, Mrs. H. G.	Bessemer
Frey, Mrs. S. S.	Ensley
Garmon, Mrs. C. N.	Wenonah
Harris, Mrs. E. A.	Bessemer
Horn, Mrs. J. R.	Bessemer
Johnson, Mrs. B. H.	Bessemer
Lilly, Mrs. R. E.	Bessemer
McEniry, Mrs. E. P.	Bessemer
McMahon, Mrs. J. M.	Bessemer
Miller, Mrs. W. M.	Bessemer
Payne, Mrs. W. N.	Bessemer
Pow, Mrs. J. R.	Bessemer
Ramey, Mrs. C. W.	McCalla
Ray, Mrs. Weldon	Bessemer
Robinson, Mrs. C. R.	Bessemer

Rogers, Mrs. M. R.	Bessemer
Schilleci, Mrs. V. J.	Bessemer
Smith, Mrs. F. C.	Bessemer
Taylor, Mrs. A. S.	Bessemer
Terrell, Mrs. Clyde	Bessemer
Williamson, Mrs. G. W.	Bessemer
Wright, Mrs. S. W.	Bessemer

LAUDERDALE

Bayles, Mrs. L. E.	Florence
Bennett, Mrs. T. L.	Florence
Brannon, Mrs. R. A.	Florence
Brown, Mrs. H. G.	Florence
Brown, Mrs. J. R.	Florence
Carter, Mrs. J. J.	Florence
Cheney, Mrs. H. W.	Florence
Cloyd, Mrs. T. D.	Florence
Deibert, Mrs. K. R.	Florence
Dunn, Mrs. M. C.	Florence
Fraser, Mrs. L. E.	Florence
Herndon, Mrs. H. V.	Florence
Hightower, Mrs. R. G.	Florence
Jackson, Mrs. A. A.	Florence
Jackson, Mrs. N. E.	Florence
Jeter, Mrs. J. N.	Florence
Luckey, Mrs. C. F.	Florence
Middleton, Mrs. J. G.	Florence
Norvell, Mrs. L. R.	Florence
Norvell, Mrs. S. S.	Florence
Price, Mrs. L. C.	Florence
Rea, Mrs. J. W.	Florence
Rice, Mrs. J. B.	Florence
Simpson, Mrs. H. M.	Florence
Simpson, Mrs. H. M., Jr.	Florence
Simpson, Mrs. W. C.	Florence
Walden, Mrs. J. D.	Florence

MADISON

Anderson, Mrs. H. L.	Huntsville
Baker, Mrs. G. L.	Huntsville
Bibb, Mrs. R. C.	Huntsville
Caldwell, Mrs. E. V.	Huntsville
Camp, Mrs. E. E.	Huntsville
Coffee, Mrs. J. Y.	Huntsville
Cowart, Mrs. N. D.	Huntsville
Dilworth, Mrs. T. E.	Huntsville
Donovan, Mrs. V.	Huntsville
Duncan, Mrs. M. M.	Huntsville
Etheridge, Mrs. W. N.	Huntsville
Evans, Mrs. J. W.	Huntsville
Freeze, Mrs. J. M.	Huntsville
Gay, Mrs. O. F.	Huntsville
Grote, Mrs. C. A.	Huntsville
Hamm, Mrs. Pat	Huntsville
Hewitt, Mrs. L. B.	Huntsville
Huckaby, Mrs. G. B.	Huntsville
Jordan, Mrs. Frank	Huntsville
Jordan, Mrs. J. L.	Huntsville
Lary, Mrs. J. L.	Huntsville
Laughlin, Mrs. J. B.	Huntsville
McCown, Mrs. W. G.	Huntsville
McKissick, Mrs. W. M.	Huntsville
Miller, Mrs. A.	Huntsville
Moore, Mrs. B. H.	Huntsville
Moorman, Mrs. J. D.	Huntsville
Moorman, Mrs. M. R.	Huntsville
Reynolds, Mrs. D. B.	Huntsville
Sammons, Mrs. R. A.	Huntsville
Smith, Mrs. F. W.	Huntsville
Walker, Mrs. H. O.	Huntsville
Walker, Mrs. J. E.	Huntsville
Walker, Mrs. Moody	Huntsville
Whitaker, Mrs. J. E.	Huntsville
Wikle, Mrs. J. O.	Madison

MARION

Brooks, Mrs. J. O.	Hamilton
Christopher, Mrs. R. C.	Guin
Couch, Mrs. Edwin	Winfield
Crews, Mrs. F. F.	Guin

Howell, Mrs. Etta	Hamilton
Hulett, Mrs. A. W.	Hamilton
Mason, Mrs. R. H.	Hamilton
Wear, Mrs. T. R.	Hamilton

MARSHALL

Alves, Mrs. W. J.	Guntersville
Barker, Mrs. H. E.	Boaz
Corley, Mrs. L. F., Jr.	Boaz
Crawford, Mrs. J. M.	Arab
Finlay, Mrs. A. G.	Guntersville
Haden, Mrs. R. H.	Guntersville
Hunt, Mrs. M. T.	Boaz
Isbell, Mrs. A. L.	Albertville
Lavender, Mrs. B. N.	Albertville
Porch, Mrs. E. F.	Arab
Rogers, Mrs. H. L.	Albertville
Speir, Mrs. R. C.	Guntersville
Weatherington, Mrs. Lee	Boaz

MOBILE

Abell, Mrs. R. E.	Mobile
Adams, Mrs. M. V.	Mobile
Agee, Mrs. E. B.	Mobile
Armistead, Mrs. J. R.	Prichard
Atkinson, Mrs. W. J.	Mobile
Balovich, Mrs. V. N.	Spring Hill
Baumhauer, Mrs. J. H.	Mobile
Beck, Mrs. J. E.	Mobile
Bell, Mrs. J. M.	Mobile
Bender, Mrs. T. J.	Mobile
Boudreau, Mrs. F. T.	Mobile
Brown, Mrs. A. J.	Mobile
Brown, Mrs. C. L.	Mobile
Brown, Mrs. N. L.	Mobile
Burke, Mrs. D. W.	Mobile
Carroll, Mrs. D. E.	Mobile
Cleveland, Mrs. C. M.	Mobile
Coats, Mrs. W. P.	Chickasaw
Cogburn, Mrs. H. R.	Mobile
Conditt, Mrs. A. K.	Mobile
Cowden, Mrs. A. M.	Mobile
Crosby, Mrs. J. F.	Spring Hill
Davis, Mrs. C. S.	Spring Hill
Dismukes, Mrs. H. M.	Mobile
Dix, Mrs. A. S.	Mobile
Dodson, Mrs. J. H.	Mobile
Dodson, Mrs. M. H.	Mobile
Doehring, Mrs. E. T.	Montrose
Donald, Mrs. J. G.	Mobile
Donald, Mrs. J. W.	Spring Hill
Dudley, Mrs. E. A.	Mobile
Dumas, Mrs. J. F.	Mobile
Eichold, Mrs. Sam	Mobile
England, Mrs. F. T.	Mobile
England, Mrs. J. T.	Mobile
Erwin, Mrs. J. H.	Mobile
Eskridge, Mrs. Marshall	Mobile
Ewing, Mrs. J. S.	Montrose
Fonde, Mrs. W. G.	Mobile
Frazer, Mrs. E. B.	Mobile
Gewin, Mrs. H. M.	Spring Hill
Gilchrist, Mrs. P. P.	Mobile
Goldfarb, Mrs. P. M.	Mobile
Haas, Mrs. T. D.	Mobile
Hannon, Mrs. W. C.	Mobile
Havs, Mrs. J. R.	Mobile
Heiter, Mrs. W. L.	Mobile
Henderson, Mrs. A. D.	Spring Hill
Henderson, Mrs. T. B.	Mobile
Hinton, Mrs. L. H.	Mobile
Hope, Mrs. J. C., Sr.	Mobile
Hope, Mrs. J. C., Jr.	Mobile
Howard, Mrs. P. J.	Mobile
Hudson, Mrs. V. T.	Mobile
Hyman, Mrs. Jack	Mobile
Jones, Mrs. W. C.	Mobile
Kahn, Mrs. Leon	Mobile
Kimbrough, Mrs. B. B.	Mobile

King, Mrs. R. T.	Mobile	Benkwith, Mrs. Karl	Montgomery
Lester, Mrs. R. P.	Mobile	Bickerstaff, Mrs. J. W.	Montgomery
Lightcap, Mrs. C. A.	Mobile	Bird, Mrs. B. C.	Montgomery
Lingo, Mrs. J. K.	Mobile	Boozer, Mrs. T. S.	Montgomery
Little, Mrs. J. H.	Mobile	Branch, Mrs. J. L.	Montgomery
March, Mrs. G. M.	Mobile	Brannon, Mrs. W. T.	Montgomery
Marshall, Mrs. S. P.	Mobile	Britton, Mrs. W. R.	Montgomery
Martin, Mrs. H. F.	Chickasaw	Brock, Mrs. W. M.	Montgomery
McVay, Mrs. L. R.	Mobile	Burwell, Mrs. P. K.	Montgomery
Meeker, Mrs. W. R.	Mobile	Byrne, Mrs. H. C.	Montgomery
Mershon, Mrs. R. B.	Fairhope	Cameron, Mrs. J. M.	Montgomery
Meyers, Mrs. C. D.	Mobile	Campbell, Mrs. Fred	Montgomery
Middleton, Mrs. T. F.	Mobile	Cannon, Mrs. D. L.	Montgomery
Mighell, Mrs. J. R.	Mobile	Cobbs, Mrs. B. W.	Montgomery
Miller, Mrs. J. B.	Mobile	Collins, Mrs. H. C.	Montgomery
Minnich, Mrs. W. C.	Mobile	Daniel, Mrs. W. A.	Montgomery
Minor, Mrs. W. H.	Mobile	Davis, Mrs. J. W., Jr.	Montgomery
Mintz, Mrs. H. H.	Spring Hill	Dawson, Mrs. H. P.	Montgomery
Mitchell, Mrs. G. J.	Mobile	Dorough, Mrs. B. F.	Montgomery
Moore, Mrs. J. R.	Mobile	Draughon, Mrs. R. L.	Montgomery
Mortensen, Mrs. A. V. N.	Spring Hill	Dunn, Mrs. David, Jr.	Montgomery
Moss, Mrs. J. E.	Mobile	Everest, Mrs. P. D.	Montgomery
Muscat, Mrs. J. O.	Mobile	Farrior, Mrs. J. H.	Montgomery
Muscat, Mrs. V. P.	Mobile	Gill, Mrs. D. G.	Montgomery
Neely, Mrs. W. J.	Mobile	Hagood, Mrs. D. S.	Montgomery
Newburn, Mrs. G. W., Sr.	Prichard	Henry, Mrs. R. C.	Montgomery
Newburn, Mrs. G. W., Jr.	Mobile	Holding, Mrs. B. F.	Montgomery
Newman, Mrs. L. D.	Mobile	Hough, Mrs. J. S.	Montgomery
North, Mrs. W. E.	Prichard	Hubbard, Mrs. T. B., Jr.	Montgomery
O'Gwynn, Mrs. J. C.	Mobile	Hutchinson, Mrs. H. H.	Montgomery
Oswalt, Mrs. G. C.	Mobile	Jabour, Mrs. E. P.	Montgomery
Owen, Mrs. C. W.	Mobile	Jackson, Mrs. B. F., Sr.	Montgomery
Partridge, Mrs. C. V.	Mobile	Jackson, Mrs. Frank, Jr.	Montgomery
Patton, Mrs. W. B.	Mobile	Jackson, Mrs. Truett	Montgomery
Paul, Mrs. R. K.	Mobile	Johnson, Mrs. Claud	Montgomery
Peake, Mrs. J. D.	Spring Hill	Jones, Mrs. J. A.	Montgomery
Pennington, Mrs. J. A.	Mobile	Kocour, Mrs. E. J.	Montgomery
Perdue, Mrs. J. D.	Mobile	Laslie, Mrs. Cobb	Montgomery
Phillips, Mrs. S. C.	Theodore	London, Mrs. I. D.	Montgomery
Polewoda, Mrs. W. W.	Mobile	Long, Mrs. J. A.	Montgomery
Porter, Mrs. R. E.	Spring Hill	Martin, Mrs. F. J.	Montgomery
Purvis, Mrs. W. E., III	Mobile	Martin, Mrs. J. A.	Montgomery
Raider, Mrs. Louis	Mobile	McBryde, Mrs. R. R.	Montgomery
Reaves, Mrs. J. U.	Mobile	Mertins, Mrs. P. S.	Montgomery
Roberts, Mrs. J. M.	Mobile	Monsky, Mrs. D. B.	Montgomery
Ross, Mrs. C. H.	Mobile	Moore, Mrs. E. M., Jr.	Montgomery
Rouse, Mrs. C. C.	Mobile	Mount, Mrs. Bernard	Montgomery
Rumpanos, Mrs. S. N.	Mobile	Murchison, Mrs. Grover	Montgomery
Savage, Mrs. C. H., Sr.	Prichard	Nickson, Mrs. H. C.	Montgomery
Savage, Mrs. C. H., Jr.	Mobile	Nodine, Mrs. E. R.	Montgomery
Shriner, Mrs. J. F.	Mobile	Nolan, Mrs. T. C.	Montgomery
Slaughter, Mrs. H. W.	Mobile	Oliver, Mrs. R. K.	Montgomery
Sledge, Mrs. E. S.	Mobile	Palmer, Mrs. G. F.	Montgomery
Stephens, Mrs. S. H.	Mobile	Parker, Mrs. Robert	Montgomery
Sullivan, Mrs. D. F.	Mobile	Paul, Mrs. W. G.	Montgomery
Terry, Mrs. C. D.	Spring Hill	Penton, Mrs. J. R., Sr.	Montgomery
Tucker, Mrs. W. H.	Mobile	Penton, Mrs. Sim	Montgomery
Vanhoof, Mrs. J. F.	Mobile	Perry, Mrs. J. W.	Montgomery
Walker, Mrs. Howard, Jr.	Mobile	Peters, Mrs. G. S.	Montgomery
Walker, Mrs. H. S. J.	Mobile	Praytor, Mrs. H. B.	Montgomery
Walsh, Mrs. C. H.	Mobile	Reynolds, Mrs. Fred	Montgomery
Warren, Mrs. C. M.	Mobile	Reynolds, Mrs. W. F.	Montgomery
Warren, Mrs. W. S.	Spring Hill	Riggs, Mrs. F. W.	Montgomery
Webster, Mrs. H. N.	Mobile	Rosen, Mrs. H. L.	Montgomery
Wilson, Mrs. J. M.	Mobile	Scott, Mrs. E. L.	Montgomery
Winsor, Mrs. C. W.	Spring Hill	Selikoff, Mrs. S. J.	Montgomery
Wood, Mrs. A. A.	Mobile	Smith, Mrs. Sam	Montgomery
Wright, Mrs. W. T.	Mobile	Smith, Mrs. W. H. Y.	Montgomery
Yemm, Mrs. W. A.	Spring Hill	Smith, Mrs. W. L.	Montgomery
Zieman, Mrs. Hays	Mobile	Stickley, Mrs. C. S.	Montgomery
Zieman, Mrs. J. A.	Mobile	Stokes, Mrs. E. M.	Montgomery
Zieman, Mrs. S. A.	Mobile	Strong, Mrs. Quentin	Montgomery
		Thomas, Mrs. Archie	Montgomery
		Till, Mrs. H. J.	Montgomery
		Virgin, Mrs. W. B.	Montgomery
		Waters, Mrs. H. W., Jr.	Montgomery
		Webb, Mrs. E. L.	Montgomery
		Williams, Mrs. T. H.	Montgomery
		Wishik, Mrs. J. L.	Montgomery

MONTGOMERY

Abrams, Mrs. M. J.	Montgomery
Ashurst, Mrs. R. T.	Montgomery
Austin, Mrs. B. F.	Montgomery
Bartlett, Mrs. H. S.	Montgomery
Bazar, Mrs. P. S.	Montgomery

Wool, Mrs. Jack.....	Montgomery	Geagen, Mrs. C. H.....	Tuscaloosa
		Goode, Mrs. J. H.....	Tuscaloosa
	MORGAN	Guin, Mrs. J. C.....	Tuscaloosa
Barrett, Mrs. M. E.....	Decatur	Hall, Mrs. G. W.....	Tuscaloosa
Block, Mrs. W. H.....	Hartselle	Hanby, Mrs. J. E.....	Tuscaloosa
Bragg, Mrs. J. C.....	Decatur	Hawkins, Mrs. W. F.....	Tuscaloosa
Calix, Mrs. A. A.....	Decatur	Herrod, Mrs. H. G.....	Tuscaloosa
Chenault, Mrs. E. M.....	Decatur	Jackson, Mrs. A. F.....	Tuscaloosa
Chenault, Mrs. J. M.....	Decatur	Jordan, Mrs. O. L.....	Tuscaloosa
Duncan, Mrs. W. C.....	Hartselle	Keller, Mrs. J. J.....	Tuscaloosa
Evans, Mrs. O. B.....	Decatur	King, Mrs. H. G.....	Tuscaloosa
Guyton, Mrs. T. M.....	Decatur	Koch, Mrs. R.....	Tuscaloosa
Hamil, Mrs. J. Y.....	Decatur	Laurence, Mrs. Toombs	Tuscaloosa
Harris, Mrs. L. C.....	Decatur	Lesser, Mrs. L. I.....	Tuscaloosa
Hughes, Mrs. J. W.....	Decatur	Lewis, Mrs. W. D.....	Tuscaloosa
Irwin, Mrs. Willard.....	Moulton	Lord, Mrs. J. D.....	Tuscaloosa
Lavender, Mrs. C. B.....	Hartselle	Majors, Mrs. W. B.....	Tuscaloosa
Lavender, Mrs. C. W.....	Hartselle	Mayfield, Mrs. P. B.....	Tuscaloosa
Meyer, Mrs. I. S.....	Decatur	McBurney, Mrs. Ralph	Tuscaloosa
Murphree, Mrs. L. R.....	Decatur	McCullough, Mrs. J.....	Tuscaloosa
Nash, Mrs. J. C.....	Decatur	Moody, Mrs. Maxwell, Jr.....	Tuscaloosa
Nungester, Mrs. G. H.....	Decatur	Mountford, Mrs. A. H.....	Tuscaloosa
Pitt, Mrs. C. K.....	Decatur	Nelson, Mrs. Robert.....	Tuscaloosa
Pitt, Mrs. McCoy.....	Decatur	Oliver, Mrs. J. T.....	Tuscaloosa
Sherrill, Mrs. F. O., Jr.....	Hartselle	Partlow, Mrs. David.....	Tuscaloosa
Shook, Mrs. B. S.....	Falkville	Partlow, Mrs. R. C.....	Tuscaloosa
Weiss, Mrs. J. T.....	Decatur	Patrick, Mrs. K. H., Jr.....	Tuscaloosa
	PIKE	Patton, Mrs. T. H., Sr.....	Tuscaloosa
Beck, Mrs. C. K.....	Troy	Patton, Mrs. T. H., Jr.....	Tuscaloosa
Brantley, Mrs. J. A.....	Troy	Reim, Mrs. Norman.....	Tuscaloosa
Colley, Mrs. J. H.....	Troy	Rhodes, Mrs. G. A.....	Tuscaloosa
Colley, Mrs. J. O., Jr.....	Troy	Searcy, Mrs. H. B.....	Tuscaloosa
Cowles, Mrs. T. D.....	Troy	Shamblin, Mrs. Dawson.....	Tuscaloosa
Stewart, Mrs. W. P.....	Troy	Shamblin, Mrs. J. L., Jr.....	Tuscaloosa
	TALLADEGA	Shamblin, Mrs. J. R.....	Tuscaloosa
Bliss, Mrs. R. F.....	Talladega	Shamblin, Mrs. W. G.....	Tuscaloosa
Cole, Mrs. L. G.....	Talladega	Shamblin, Mrs. W. J.....	Tuscaloosa
Davis, Mrs. S. D.....	Talladega	Sharman, Mrs. L. C.....	Tuscaloosa
Evans, Mrs. K. P.....	Sylacauga	Snow, Mrs. J. S.....	Tuscaloosa
Friday, Mrs. W. C.....	Sylacauga	Stephens, Mrs. A. B.....	Tuscaloosa
Graves, Mrs. L. D.....	Talladega	Tarwater, Mrs. J. S.....	Tuscaloosa
Hardwick, Mrs. J. L.....	Talladega	Tatum, Mrs. J. C.....	Tuscaloosa
Jacobs, Mrs. M. D.....	Sylacauga	Tragle, Mrs. W. H.....	Tuscaloosa
Moody, Mrs. M. D.....	Childersburg	Trevathan, Mrs. R.....	Tuscaloosa
Nickerson, Mrs. Paul.....	Sylacauga	Trice, Mrs. P. A.....	Tuscaloosa
Rea, Mrs. R. C.....	Sylacauga	Walker, Mrs. A. M.....	Tuscaloosa
Roberts, Mrs. E. H.....	Talladega	Wilson, Mrs. J. W.....	Tuscaloosa
Salter, Mrs. C. L.....	Talladega	Woodley, Mrs. L. S.....	Tuscaloosa
Sims, Mrs. J. A.....	Renfroe	Woods, Mrs. L. C.....	Tuscaloosa
Sims, Mrs. M. H.....	Renfroe		
Stock, Mrs. R. P.....	Childersburg		
Thompson, Mrs. J. L., Jr.....	Sylacauga		
Toole, Mrs. A. F.....	Talladega		
Vaughn, Mrs. M. E.....	Sylacauga		
Winslow, Mrs. R. C.....	Sylacauga		
	TUSCALOOSA		WALKER
Abbott, Mrs. C. E., Jr.....	Tuscaloosa	Baker, Mrs. R. W.....	Dora
Adams, Mrs. H. A.....	Tuscaloosa	Camp, Mrs. J. S.....	Jasper
Anderson, Mrs. W. D.....	Tuscaloosa	Donaldson, Mrs. B. E.....	Carbon Hill
Askew, Mrs. W. A.....	Tuscaloosa	Gwin, Mrs. P. E.....	Sumiton
Brown, Mrs. J. M.....	Tuscaloosa	Ivey, Mrs. W. H.....	Jasper
Burnum, Mrs. J. F.....	Tuscaloosa	Jackson, Mrs. A. C.....	Jasper
Clements, Mrs. R. M.....	Tuscaloosa	Kelly, Mrs. T. G.....	Jasper
Cochrane, Mrs. R. Robert.....	Tuscaloosa	Mack, Mrs. D. E.....	Sipsey
Collier, Mrs. J. P.....	Tuscaloosa	Manasco, Mrs. Titus.....	Carbon Hill
Cone, Mrs. T. S.....	Tuscaloosa	Nicholson, Mrs. Francis.....	Jasper
Conwill, Mrs. G. B.....	Tuscaloosa	O'Rear, Mrs. E. A., Jr.....	Jasper
Darden, Mrs. W. H.....	Northport	Payne, Mrs. T. J., Jr.....	Jasper
Davis, Mrs. J. S.....	Tuscaloosa	Snoddy, Mrs. W. T., Jr.....	Jasper
Davis, Mrs. Luther, Jr.....	Tuscaloosa	Taggart, Mrs. J. K., Jr.....	Jasper
Donald, Mrs. W. J.....	Tuscaloosa	Walker, Mrs. L. M.....	Jasper
Douglass, Mrs. W. C.....	Tuscaloosa	Watkins, Mrs. H. S.....	Oakman
Dowling, Mrs. J. D.....	Tuscaloosa	Whitley, Mrs. M. E.....	Cordova
Durrett, Mrs. J. H.....	Tuscaloosa		
Englebert, Mrs. W. F.....	Tuscaloosa		
Findley, Mrs. H. L., Jr.....	Tuscaloosa		
Folsom, Mrs. W. C.....	Tuscaloosa		

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

TRENDS IN MORTALITY FROM SELECTED
CAUSES

Contributed by
James C. Terrell, Statistician

Advancements in medical science, expanded public health services, and more available facilities have greatly increased the average number of years which we may expect to live. But, everyone must die eventually. The result of deferred mortality is an increased proportion of deaths occurring in the aged population group. Interpretations of mortality trends of the so-called degenerative diseases should take into account an increasing population of older persons, and the prevalence of cancer and diseases of the heart and circulatory system in that age group. Sex and color, as well as age, are factors which affect death rates and life expectancy.

The twofold purpose of this analysis was to determine mortality differentials between selected causes of death for specified years, and to ascertain whether or not the differences are due to changes in the age, sex and race composition of the population.

The method used was to adjust mortality rates for age, sex and race differences in the population of Alabama. Rates so adjusted are called specific rates. The data were taken from death certificates on file in the Alabama State Health Department for the years 1930, 1940, 1949, 1950 and 1951. Three major causes of death—tuberculosis, cancer and heart diseases—were selected for study. Since statistics for heart diseases for 1949 and later years are not comparable with the data compiled prior to 1949, adjustments were made by using a comparability ratio.¹ No attempt has been made to adjust data for any variations which may have occurred

in diagnosing causes of deaths. Rates were computed by sex, color and age of decedent for all Alabama deaths attributed to tuberculosis, heart diseases and cancer. For comparison, the data were used for 1930, 1940 and the three-year—1949-1951—annual average. The latter was used instead of the 1950 figure in an attempt to compensate for possible errors in coding arising out of the revised cause-of-death code which was introduced in 1949. The mortality rates were then applied to the 1950 official census of population which was used as the standard population for this analysis. The number of deaths within each category (sex, color and age group) represented the deaths which could be expected if the health conditions, life expectancy and mortality rate which existed in 1930 or 1940 had continued unchanged into 1950. By adding the number of deaths falling within each age group by sex and color, dividing each sum by the corresponding 1950 Census population, new rates were computed for each cause of death. The computed specific rates were adjusted for differences in the sex, color and age composition of the population of the years selected for comparison. All rates shown are per 100,000 population. The procedures outlined produced the following results and conclusions.

TUBERCULOSIS

Tuberculosis mortality has been decreasing in each sex, color and age category.

Sex and Color	1930	1949-1951	
		1940	(Average)
Total	85.5	52.1	27.5
White male.....	56.4	35.1	21.1
White female....	60.4	32.6	13.9
Colored male.....	134.9	90.3	55.0
Colored female...	149.9	91.0	42.8

It is apparent from these data that death rates from tuberculosis have decreased very sharply since 1930. White rates are much lower than colored rates and female rates are lower than male rates. An analysis of the more detailed data reveals that these decreases are reflected in every sex, color and age group breakdown.

Mr. Terrell is now a member of the staff of the Georgia State Health Department.

1. The Effect of the Sixth Revision of the International Lists of Diseases and Causes of Death Upon Comparability of Mortality Trends, National Office of Vital Statistics, Volume 36, Number 10.

HEART DISEASE

Heart disease has been the leading cause of death since 1925.

Sex and Color	1930	1949-1951	
		1940	(Average)
Total	207.9	251.2	260.4
White male	212.4	276.0	299.2
White female	160.1	198.7	181.4
Colored male	271.3	311.4	341.9
Colored female	239.3	254.6	270.9

These rates clearly show heart disease has increased rapidly since 1930 with the greatest increase between 1930 and 1940. The white male, colored male, and colored female rates reflect the same general increase of the total rate with the white female rate increasing from 1930 to 1940 and decreasing since 1940. In general, heart disease mortality has decreased at ages under 35 and increased at ages over 35. The white male rate has decreased at ages under 30 and increased at ages over 30. The white female, colored male and colored female rates have decreased at almost all ages under 45 and increased at ages over 45.

CANCER

Cancer mortality has increased steadily at most ages.

Sex and Color	1930	1949-1951	
		1940	(Average)
Total	75.8	81.3	92.3
White male	67.4	76.1	94.4
White female	96.9	96.1	95.9
Colored male	37.6	45.8	79.7
Colored female	83.9	93.7	92.0

Age adjusted rates show that cancer mortality has increased steadily since 1930. The white male rate has increased at a slightly faster rate than the total; the white female rate has shown little change since 1930; the colored male rate has increased sharply since 1930 with the greatest increase since 1940; the colored female rate increased between 1930 and 1940 and decreased slightly after 1940. Cancer death rates by age groups show that rates for white and colored males have increased at almost every age, particularly at ages over 45. The white female rate has increased at ages over 65 and most ages under 30. The colored female rate has increased at ages 1-14 and most ages over 45. Cancer mortality in the 0-14 age group has increased for each sex and color.

SUMMARY

Improved diets and living conditions, earlier diagnosis, better facilities and improved methods of treatment have lowered the tuberculosis death rate in Alabama since 1930 in nearly every sex, color and age category. Tuberculosis mortality in the white population continues to be lower than that for the colored population; the rate for females is lower than that for males. Great improvement has been made in diagnosis and treatment, but tuberculosis remains as one of the ten leading causes of death in Alabama.

Heart disease mortality has increased rapidly in the older ages but has decreased slightly in the younger ages, resulting in a steady increase in the general rate. Death rates of males have shown greater increases than those of females. The white female rate actually has decreased since 1940. Colored mortality has continued to run higher than that for the white population.

Cancer mortality among white females has remained relatively constant since 1930, increasing for ages under 30 and over 65 and decreasing for ages in between. The cancer death rate has increased steadily since 1930 with the exception of that for white females. The increase has been greatest in the age group 0-14 and in ages over 45.

In conclusion, it may be said that great progress has been made in the fight against tuberculosis, but that the victory is not yet complete. Heart disease and cancer mortality is on the increase and only for white female deaths has any progress been made in the effort to curb these major killers. It is evident that changes in the age, sex and color composition of the population do not account for observed changes in the mortality experience of the last 20 years.

All tuberculosis patients exhibit one reinfection after another, for by its nature tuberculosis is a metastasizing infection, be it through bronchi, lymphatics, or blood stream.—*E. M. Medlar, M. D., Am. Rev. Tuberc., March 1955.*

Some chronic conditions are preventable; some are deferable; some are curable; and some are modifiable. We know how they are spread and how to prevent their spread. Some conditions, such as diabetes or rheumatic heart disease, are deferable even where there is a tendency toward them, if the appropriate medical care is provided in time. Some conditions, such as pernicious anemia or cerebral hemorrhage, are modifiable.—*Daniel Bergsma, M. D., New Jersey, Pub. Health News, April 1955.*

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

May 1955

Examinations for diphtheria bacilli and Vincent's	132
Agglutination tests	872
Typhoid cultures (blood, feces and urine)	793
Brucella cultures	11
Examinations for malaria	132
Examinations for intestinal parasites	3,491
Serologic tests for syphilis (blood and spinal fluid)	24,660
Darkfield examinations	2
Examinations for gonococci	1,598
Examinations for tubercle bacilli	3,337
Examinations for Negri bodies	103
Water examinations	1,897
Milk and dairy products examinations	5,203
Miscellaneous examinations	2,291
Total	44,522

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1955

	April	May	E. E.* May
Typhoid and paratyphoid fever	3	1	6
Undulant fever	1	1	3
Meningitis	8	8	11
Scarlet fever	49	27	28
Whooping cough	165	375	74
Diphtheria	3	6	9
Tetanus	1	4	4
Tuberculosis	249	200	275
Tularemia	0	1	2
Amebic dysentery	2	1	2
Malaria	0	1	7
Influenza	366	144	232
Smallpox	0	0	0
Measles	500	302	972
Poliomyelitis	2	8	7
Encephalitis	3	2	2
Chickenpox	359	247	239
Typhus fever	2	5	10
Mumps	328	316	181
Cancer	487	507	378
Pellagra	1	0	1
Pneumonia	271	202	197
Syphilis	174	142	434
Chancroid	4	1	12
Gonorrhea	452	359	435
Rabies—Human cases	0	0	0
Positive animal heads	57	18	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR FEBRUARY 1955, AND COMPARATIVE DATA

Live Births, Stillbirths and Deaths by Cause	Number Registered During February			Rates* (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	6405	3891	2514	25.8	24.4	25.0
Deaths	2181	1305	876	8.8	8.3	10.5
Fetal deaths	115	55	60	17.6	22.0	22.0
Infant deaths— under one month	114	65	49	17.8	20.6	24.4
under one year	193	93	100	30.1	37.6	38.2
Cause of Death						
Tuberculosis, all forms, 001-019	29	12	17	11.7	12.6	18.9
Syphilis, 020-029	7	2	5	2.8	2.8	1.6
Dysentery, 045-048					1.2	1.2
Diphtheria, 055	1	1		0.4	0.4	0.8
Whooping cough, 056	3		3	1.2		
Meningococcal infections, 057	3	2	1	1.2	0.4	3.7
Poliomyelitis, 080-081					0.4	0.4
Encephalitis, 082, 083	1	1		0.4		
Measles, 085	1	1		0.4	0.4	
Malignant neoplasms, 140-205	237	165	72	95.3	94.8	96.2
Diabetes mellitus, 260	27	17	10	10.9	8.1	15.6
Pellagra, 281					1.2	0.8
Vascular lesions, 330-334	281	151	130	113.1	115.5	115.5
Rheumatic fever, 400- 402	6	1	5	2.4	2.4	0.8
Diseases of the heart, 410-443	706	458	248	284.0	257.9	333.5
Hypertension with heart disease, 440- 443	155	71	84	62.4	52.1	88.4
Diseases of the arteries, 450-456	41	30	11	16.5	13.4	16.4
Influenza, 480-483	39	19	20	15.7	10.6	61.3
Pneumonia, 490-493	96	53	43	38.6	31.7	67.0
Bronchitis, 500-502	5	5		2.0	1.6	2.5
Appendicitis, 550-553	3	2	1	1.2	0.4	0.8
Intestinal obstruction and hernia, 560-561, 570	7	4	3	2.8	2.8	2.5
Gastro-enteritis and colitis, under 2, 571.0, 764	7	3	4	2.8	4.9	0.4
Cirrhosis of liver, 581	11	9	2	4.4	4.1	2.5
Diseases of pregnancy and childbirth, 640- 689	3	3		4.6	14.6	9.6
Congenital malforma- tions, 750-759	27	19	8	4.2	4.0	4.3
Accidents, total, 800- 962	145	92	53	58.3	68.3	60.0
Motor vehicle acci- dents, 810-835, 960	55	42	13	22.1	32.5	23.4
All other defined causes	391	221	170	157.3	141.6	171.9
Ill-defined and un- known causes, 780- 793, 795	104	34	70	41.8	37.0	58.0

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Stillbirths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

CEREBRAL PALSID CHILDREN NEED VISUAL AID

A large number of cerebral palsied children also suffer eye defects which often can be corrected and should be given attention, according to a New York physician.

Dr. Arnold S. Breakey, Lenox Hill Hospital, said an estimated six per 1,000 live born babies suffer cerebral palsy, which ranks second only to polio as acrippler of children. More than half of these children may have eye defects.

He said in the June Archives of Ophthalmology, published by the American Medical Association, that all infants found to have eye defects should be examined for evidence of cerebral palsy, a disability resulting from injury to the motor centers of the brain. Children who have eye defects accompanying cerebral palsy should be treated, since many of the defects can be corrected and total rehabilitation of the patient may be helped by visual improvement.

Dr. Breakey pointed out that poor vision in these children may have been overlooked because of more obvious defects, such as difficulty in walking. A study of 100 cerebral palsy patients at Lenox Hill Hospital showed that 56 per cent had visual defects, which he said was "representative" of cerebral palsied children as a whole.

The most usual disorder was in muscle balance. About 40 per cent of the group studied suffered turning in or out of the eyes. Lenses, surgery, exercise, and other forms of treatment were used and many of the children showed improvement.

"Cerebral palsy victims in our population represent a very significant group," Dr. Breakey said. "... every victim of this disease deserves an early eye examination. Careful diagnosis and adherence to accepted methods of therapy yield gratifying results."

PHILADELPHIA DOCTORS REPORT NEW HEART OPERATION

What may be the first successful operation for removal of a myocardial aneurysm, a heart defect, was reported a few days ago

by Drs. William Likoff and Charles P. Bailey, Philadelphia.

Although long survival with myocardial aneurysm is possible, it is "extremely unlikely," the doctors said. However, life-prolonging surgery may now be possible for this type of aneurysm.

Such a defect was successfully removed from a 56-year-old man April 15, 1954, at Hahnemann Hospital, Philadelphia. The case was described in the July 16 Journal of the American Medical Association.

Myocardial aneurysms may result when a coronary blood vessel is blocked by a blood clot. The cells in the area around the clot die and scar tissue is formed. The aneurysm itself is like a blister, bulging out from the myocardium. The walls of the sac are thin and sometimes consist mostly of scar tissue.

The operation involved the removal of the sac from the left ventricle of the heart.

The patient recovered with little difficulty. After several weeks, he was able to walk and climb stairs without shortness of breath, pain, or galloping heart beat—all of which he had suffered before surgery.

Although no measures were taken during surgery to change the underlying coronary disease, the effects of the disease were beneficially altered by the operation, the doctors said.

An aneurysm of the heart is not merely an "interesting anatomic anomaly," but a serious complication of a serious coronary disease, they said.

PREGNANT WOMEN SUCCESSFULLY UNDERGO HEART SURGERY

A heart operation which now seems to be safe even during pregnancy shows promise in reducing maternal deaths and the need for therapeutic abortions and sterilization among women with a serious heart defect.

In fact, childbearing after this operation even may be good for some cardiac disease patients, because the hormones of pregnancy apparently have some protective effect against rheumatic heart activity.

This report was made in the July 16 Journal of the American Medical Association by Drs. Robert P. Glover, Thomas J. E.

O'Neill and O. Henry Janton, all of Philadelphia, and Dr. Donald E. McDowell, now of Asuncion, Paraguay.

Heart disease complicates one to two per cent of all pregnancies and accounts for about 25 per cent of all maternal deaths, they said. While pregnancy does not seem to hasten or adversely affect rheumatic heart disease, it throws a heavier burden on the heart, which may mark the beginning of a steady deterioration.

One heart defect especially common among young women of child-bearing age is mitral stenosis, a narrowing of the opening between two chambers in the heart.

Mitral commissurotomy, an operation which reopens that passage, has been successfully performed by the Philadelphia physicians on five pregnant women and six patients who later became pregnant. Nine of them have had normal deliveries so far.

Since a large number of therapeutic abortions are performed because of mitral stenosis, the physicians said the need for such abortions also may be "greatly modified" by the success of the operation.

"There is now a more optimistic outlook for such patients in that many may continue their pregnancies while exposing themselves to minimal risk," they said. "Mitral commissurotomy also may offer new hope to the childless couple who have feared pregnancy because of rheumatic valvular disease in the wife."

Mitral stenosis not only has great medical significance but equal importance from the psychological, sociologic, and economic aspects, they said, because of its effect on home, family, and marriage. Therapeutic abortion and/or sterilization of the wife is not a satisfactory solution and may break up a marriage, they said.

Although the doctors had operated on only a few patients, they said it could be "definitely stated" that mitral commissurotomy during pregnancy is safe for both mother and child. It "offers added hope to women who have feared having children because of mitral stenosis" and "greater assurance" of safely continuing a pregnancy which might otherwise have been terminated.

ATOMIC TEST PROGRAM GIVES MAXIMUM PUBLIC SAFETY

Safety measures at the Nevada atomic test site have reduced hazards to the public to a minimum, according to Gordon M.

Dunning of the Atomic Energy Commission's Division of Biology and Medicine, Washington.

After five major tests no one has incurred radiation exposure off the site that may be considered "anywhere near hazardous," Dunning said in the July 16 Journal of the American Medical Association.

There have been no known cases of serious eye damage from light effects, nor any reported injury to persons from shock waves.

Carrying out an extensive program of warnings before tests and checks after tests are 100 full time employees of the Atomic Energy Commission. In addition, many persons participate on a part-time basis throughout the United States.

The basic consideration for the public's safety was shown in the selection of the test site. It covers an area of 600 square miles, with an adjacent U. S. Air Force gunnery range of 4,000 square miles. These are surrounded by "wide expanses of sparsely populated land."

Preceding a test, a "warning circle" is set up and all aircraft are warned by the Civil Aeronautics Administration to remain out of the circle. Roadblocks are established on major highways in the area to alert motorists to the approaching blast and flash of light.

The AEC and U. S. Public Health Service have cooperated in establishing a liaison program with residents in surrounding areas. Liaison men live in each of 12 zones. Their duties include becoming so much a part of the neighborhood that residents would respect their decisions and seek their advice if needed. The men also monitor radioactivity-measuring equipment following the tests.

After each blast, monitoring equipment at the site, in nearby communities, and on mobile equipment measures the radioactive fall-out.

Airplanes track the clouds and plot the fall-out pattern on the ground.

Ninety U. S. Weather Bureau stations throughout the United States collect fall-out data, as do 10 AEC installations in different parts of the country.

Contamination of water and air in the surrounding area was found to be relatively small after each blast, Dunning said.

There have been no reported cases of people receiving radiation burns off the site.

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THE PATIENT'S ATTITUDE TOWARD HIS DISEASE IN PSYCHOSOMATIC ILLNESS

JAMES B. McLESTER, M. D.

Tuscaloosa, Alabama

Psychosomatic illness is a rather large problem for each of us regardless of type of practice. In a practice of internal medicine almost half of my patients have had this variety of psychoneurosis. These patients are probably a little more apt to change doctors frequently than are those with wholly organic trouble and most that I see have already been to several physicians. I am sure that a proportion of them move on to still others. When this frequent change is observed to be a common pattern with a group of patients, as it is here, then one should examine the factors involved and possibly develop a different approach so that these people will stay with one doctor long enough to get some help.

Psychosomatic illness is a situation wherein the patient's subjective discomforts are referable to his physical self although they are of psychic origin. The psychosomatic response occurs normally in the form of the blush on embarrassment, a rapid heart on excitement, and of course many others, but this is not disease. However, when the physical sensation associated with response to the emotions causes complaint or results in structural change, then there is psychosomatic illness. Note that this definition ignores mechanism and stresses physical manifestation of emotional origin, regardless of mechanism.

I now believe even more firmly than I did in 1937 the idea I discussed then before this Association in Birmingham. I pointed

out that most, if not all, subjective sensations experienced by these people are immediately due to an actual disturbance in function of some organ or physiologic system which is in turn secondary to emotional stress and that the same disturbance in function produces identical sensation when caused by wholly organic disease. This is an elementary concept that expresses a fairly understandable connection between emotion and discomfort. It purposefully ignores fundamental psychiatric formulations, understanding of which is difficult for those of us with little training in psychiatry. Many patients cannot accept the fact of psychosomatic disease and need an understandable explanation. Knowledge of the complex mechanism of this phenomenon is desirable but difficult for the physician and impossible for most lay patients. It is not a prerequisite for the development of a working knowledge of the disease. This simplified idea of emotional stress leading to organic malfunction and thus to discomfort is more nearly pitched to the average patient's understanding and offers a tangible explanation that does let the patient accept the diagnosis and thus allows him and his physician to put their attentions on the reasons for the emotional stress.

The emotions that lead to psychosomatic response can have almost any origin. My purpose today is to discuss the disease itself as such a source of emotion.

It is rather common that when an emotional situation creates a somatic response with appropriate physical discomfort, this discomfort leads to further emotion which adds to the physical malfunction and to the

Read before the Association in annual session, Montgomery, April 22, 1955.

The author is Director of the Student Health Service, University of Alabama.

discomfort and thus establishes a vicious circle. Successful handling of these patients involves the institution of measures that will interrupt its continuity.

To understand this further we should answer an apparently foolish question: Why does the patient go to the doctor? Because he is sick? I believe not. He goes to the doctor because of the significance to him of certain discomforts or observations that he has made about himself. He goes to the doctor because he interprets these things to mean that he may be ill. Conversely, if a person feels that certain physical sensations are not indicative of disease, he does not consult a physician. Thus, the patient goes to the doctor not because he is sick but because he thinks he is sick, because he is afraid he is sick, or because he wants to know if he is sick.

Often, the patient is quite right. His physical discomforts do indicate the presence of organic disease. When we find this disease, explain its nature, and recommend appropriate management, we are following a normal course of events that the patient expects and understands and with which he is satisfied. This is probably the most common pattern.

Another pattern is one in which the physician does not find organic illness but feels satisfied that the disorder is of psychic origin. This diagnosis is rarely understood or accepted without detailed explanation because most patients have not become familiar with the fact of psychosomatic phenomena. The wandering of the psychoneurotic patient from doctor to doctor indicates his dissatisfaction with the efforts of each of his physicians which is, in turn, perhaps an expression of lack of understanding and therefore non-acceptance of the opinion and treatment offered. If the diagnostic explanation does not satisfy the patient, does not give him an understandable reason for his discomforts, then his original simple question as to what these things mean can become real anxiety. Such anxiety can in turn stimulate further disturbed function and it is especially apt to do so in the patient whose symptoms are already based on emotions.

Misinterpretation and anxiety over symptoms are difficult to measure but a careful history and the patient's manner will often point to such fears. The patient with a psychosomatic illness frequently

gives diagnoses rather than describing sensations. He says, "My food doesn't digest" instead of saying "I have pain in my stomach after meals." He is thinking of disease, not of discomfort. Other things in the history will also give clues. I pay particular attention to the patient's answer when I ask, "What do you think is the cause of your trouble?"

If the patient is afraid that his discomforts are of grave consequence, where does he get the idea? As one source, the physician himself may create emotional stress by implication that a given set of symptoms may have serious meaning. This is hard to avoid. On the one side, if one examines the patient only briefly he unavoidably shows his doubts when assuring the absence of certain diseases that may have passed through his or the patient's mind. Conversely, the fact of extensive examination or the reason given for it implies suspicion of grave disorder. Either we are not satisfying the patient's fears or we are creating more of them! The happy medium between these extremes, individual to each patient, is the path of successful management of psychosomatic disorder.

A somewhat similar source of fear of disease is the publicity given to cancer, polio, diabetes, multiple sclerosis, heart disease and tuberculosis. The harm thus done to the emotional makeup of a number of people is very great. I certainly do not recommend the discontinuation of these efforts but this publicity does create a need for greater explanation to the patient of the meaning of various otherwise insignificant sensations.

Another source of distorted emotional reaction to physical discomforts is illustrated by the patient who reports that he has not been well since some illness in the distant past, an illness that apparently had great emotional meaning to the patient. Most commonly, it is not clear in retrospect what was the exact nature or actual severity of this earlier illness and one is usually suspicious that it was psychosomatic. Here, the patient either learned from the doctor or the family, or perhaps was allowed to develop for himself, great emotional meaning for discomforts that seemed to grow out of this poorly defined earlier illness.

A similar pattern is when the patient learned in early childhood to fear physical symptoms and physiologic variants. For sev-

eral years I have asked most new patients whether they had very grave illness in infancy or early childhood. The answers to this question were interesting.

Of the last 250 consecutive patients I have seen, over 40 per cent had a functional disorder. Over a third of these told of grave childhood illness. On the other hand, only about half that proportion of those with definite organic trouble told of severe infantile disease. One explanation might be that the patient with a psychosomatic disorder has in recent years built up meaning and gravity for a vaguely remembered illness or something that his family told him about, whereas the patient with organic disease has had no need to place significance on earlier ailments and has dismissed them from his mind. That might be but it seems probable that normal parental concern can teach a sick child that any physical discomfort is serious and requires medication and thus lay the background for the development of psychosomatic disease.

I wish to cite as examples the two patients whom I had examined just before writing this: A 49-year-old childless married woman in her menopause is frightened when she has a very rapid heart and can't speak because of the lump in her throat when she is in crowds. She has various other fairly definite psychosomatic symptoms that also frighten her. She reported that she passed no urine for the first six days of her life and that she had had great discomfort from occasional urinary gravel as a preadolescent child. She is a patient with psychosomatic illness who does not now tolerate discomfort at all well. She has nothing referable to her urinary tract today but she did have something in early infancy and in childhood that was quite painful and that surely caused her family great concern which she learned from them.

Similarly, a 38-year-old man with a duodenal ulcer is scarcely disturbed at all by the epigastric burning when his stomach is empty but he is very disturbed by the sensation of inability to take a deep breath, the "smothering" sensation that he gets immediately after a large bowel movement. He had not seen a doctor over a five-year period and yet he tells of these "smothering attacks" with considerable show of anxiety. He told that prior to his birth his parents had lost a set of twins and a single child and that he weighed but three pounds

when he was born. He was carried on a pillow for a long time and his family was very concerned about his health throughout his early life. He said, "My family smothered me with attention." It is understandable that his family was worried about him and that he learned to develop similar anxiety.

Thus, the patient goes to the doctor because of the significance of his discomforts to himself. If these discomforts have much emotional content, if these discomforts mean to him that he has an illness which he fears, then they can themselves serve as a stimulus for further discomfort and create the vicious cycle that perpetuates them.

Treatment is difficult. It must include an approach from every possible angle. Many patients will need symptomatic treatment with sedatives and antispasmodics. The newer tranquilizing drugs will probably be a very effective form of such treatment. Drug treatment alone, without at least evaluation of the appropriate degree of psychotherapy, is improper. Some will need formal psychotherapy by a qualified psychiatrist but some will need only the psychotherapeutic explanation and reassurance that any of us can give.

Each patient should recognize the nature of his illness so that he will cooperate in proper treatment. To assure this in psychosomatic disease, we should explain his illness to him in greater detail, more carefully and more patiently than we need to otherwise. We should be constantly alert to fears implanted in the patient's or relative's mind by chance comment. We should develop routines of manner in handling patients that will erect automatic guards against creating undesirable emotion from improper interpretation of discomfort by sensitive, responsive, psychoneurotic or other individuals.

An important such guard is in the choice of words. One must never use the word "imagination." Use of this word creates immediate antagonism because it implies to the patient that the doctor thinks him unintelligent, unable to know whether he feels a certain sensation or not. Factually, symptoms of psychosomatic origin are not imagined. They arise through a mechanism very similar to that in organic disease and they are not mental images. As a sensation exists only in being felt, the subjective symptoms of psychosomatic illness

are quite real. The implication by a physician that real sensations are only mental images is properly rejected by the patient and along with it, perhaps equally properly, the patient rejects the physician, his opinion, and the treatment he recommends.

Choice of words can also guard against undesirable emotional impact of the illness if we explain his illness in terms that the patient's mental endowment, education, and other background make appropriate. Few patients understand them and technical terms may add to confusion and fear. There are few things that cannot be explained in simple nontechnical terms.

Another thing, although we ourselves do not always understand the patient's illness, recognition of his own uncertainty is most important for a physician. We do understand the illness better than the patient and well enough to explain it to him, and frank discussion of the major uncertainties is emotionally satisfying and guards against unjustified fears.

I am not entirely sure how it happens but something often creates in the patient's mind the exaggerated idea of how unusual his case was, how very sick he was, or how complex the operation was. He learns of a relationship between discomfort and the gravity of illness. This is undesirable and again understanding of the disease in question is in order.

Thus, in a number of ways, the physician can avoid creation of fear and can orient the patient who already misinterprets discomfort in psychosomatic diseases.

These ideas of sources of learned attitudes also point to possible prophylactic measures. The pediatrician or other physician handling small children must be careful not to create fear of disease in the child, either directly or indirectly through the parent. This is most important. We probably still have an excellent opportunity to prevent future psychosomatic disease when in later years we see these people as teen-age children and as young adults. At this time the patient's concept of disease and of medical diagnosis may still be undistorted. His mind is still elastic and he is not yet fixed in his emotional attitudes. This can be an enormous challenge to the physician responsible for the medical welfare of this age group. Physicians treating these patients, if alert to the patient's atti-

tude toward his symptoms, should be able to do much to prevent or at least lessen the probability of future psychosomatic disease.

The patient with a psychosomatic illness can perhaps be compared with the sensitive, responsive, nervously active saddle horse. These characteristics are inbred. There is nothing wrong with him. He will give a superb performance for the person who knows how to handle him. At the same time, when he does not understand his own emotional make-up and his body's response to it, the patient is like the man who does not know how to ride.

In using this comparison, one might note that although the work of this world is done by the easily handled, imperturbable plow horses, it is planned and directed by people who know how to and do ride saddle horses.

Football Players' Disorder Studied—If a doctor let parents worry him into benching every football player who developed a disorder known as hematuria, he'd end up benching the whole team.

Hematuria is a kidney ailment which may accompany the strenuous exertion of football. Many players have it some time during the season. Each year doctors are caught between parents who want their son benched and fans who want their star player back.

However, researchers making a survey of 37 university varsity football players during the 1954 season found no reason to bench players who developed hematuria.

The survey is reported in the August 27 *Journal of the American Medical Association* by Alex W. Boone, M. D., and Earl Haltiwanger, M. D., of the department of surgery, and Robert L. Chambers, B. S. Ed., of the physical education department, Duke University, Durham, N. C.

The disorder, which consists of blood in the urine, appeared in all the players, but cleared with rest. In fact, the rapidity with which it cleared was remarkable, the authors said.

Even six players who had bleeding sufficient to discolor the urine, reverted to "football normal" within three to four days.

The first signs of hematuria were found during the preseason conditioning exercises. There was a moderate increase in its occurrence at the beginning of body contact drills.

After each Saturday game, there was a peak in the number of players with hematuria, but that number usually dropped by the following Wednesday. The postgame rate remained about the same throughout the season, the authors said.

WILLIAM CRAWFORD GORGAS
SOLDIER—PHYSICIAN—SANITARIAN

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CAT.

William Crawford Gorgas came of both renowned and distinguished ancestry. His great-grandfather, a direct descendant of the Hapsburg family, migrated to America in 1680, and his mother was Amelia Gayle, whose father had been one of the most influential public men of the Southern States. It has often been said that the North and the South thus contributed of their best in influencing the character and talents of the child whose life work was to have such a dynamic force for the good of mankind.

The name Gorgas suggests a Spanish origin, and probably the remote progenitor of the American branch went to Holland in the 16th century when it was common for the Spaniards to settle in the Low Countries during the reign of Philip II. In any case, by 1680, when the family migrated to America, its language was Dutch and the family religion was Protestant. The Gorgases settled in Pennsylvania and many descendants live there today. The Doctor's grandfather, Joseph Gorgas, married Miss Sophia Atkinson and they became the parents of Josiah Gorgas.

After graduation from the United States Military Academy in 1841, Josiah immediately began to specialize in ordnance. Because of his great promise in this work, the Government sent him to Europe to study armaments of the great military nations and on his return placed him in charge of the arsenal at Watervliet. Josiah, a First Lieutenant at the outbreak of the Mexican War, was assigned in 1853 to command the arsenal at Mount Vernon, a few miles north of Mobile, Alabama. It was at this post that he met and married Miss Amelia Ross Gayle, daughter of John Gayle, former Governor of Alabama and member of Congress.

Amelia had graduated from Columbia Female Institute in Tennessee in 1841. Due to the early death of her mother, the duties of the household had fallen largely upon Amelia. She was hostess of her father's house in Washington where she met many famous people, including Henry Clay and John C. Calhoun. She often went to the Capitol with Calhoun and listened to the spir-

ited slavery debates, for even at that time the slavery issue was assuming the large proportions which ended in civil war.

Josiah's first child, William Crawford Gorgas, was born on October 3, 1854 in the old Gayle colonial mansion at Toulminville, near Mobile, Alabama, and the physician who officiated at the birth was Dr. Josiah Clark Nott. It is a remarkable coincidence in the light of the part which that baby was to play in utilizing the mosquito theory of transmission of yellow fever, a theory that had been suggested by Nott in 1848. Captain Josiah Gorgas was stationed at Fort Pickens where he was in charge of mounting heavy artillery. It was during this period that Dr. Lafayette Guild, later General Lee's surgeon of the Army of Northern Virginia, became acquainted with the Gorgas family. He became quite fond of young Willie Gorgas and often bathed him and commented about the little Hercules who was to become so renowned as a sanitarian.

Josiah kept a diary which gives a rather complete picture of son Willie's growth and development. Apparently he was quite like other boys and loved boating, hunting and swimming. Possibly his father's stories about his own experiences at West Point, or his own experiences at the various military posts where his father had been assigned, caused young William to decide on a military career. From the various written records and private conversations of the author with three of his sisters, he was no mental prodigy but was a good natured, cheerful youngster.

Early in 1861, while the Gorgas family was stationed at Charleston, South Carolina, they were forced to make one of the cruelest decisions possible. Every day brought fresh news of the widening breach between the North and the South. It seemed that the outbreak of war was certain and that only a miracle could prevent it. Josiah, a Pennsylvanian, served with distinction in the United States Army and had every reason to expect a distinguished career in that service. He was married to the daughter of a southern Governor.

Amelia Gayle Gorgas was a loyal wife and she remembered that war between the North and South had been a possibility even at the time of their marriage. So she repeatedly told him that he should not consider her feelings but must make his own decision and that she would follow him wherever he might go. Gorgas had a genuine love for the South and its people. He had a sincere conviction that it was embracing principles which he could support. In the end Josiah Gorgas decided to cast his lot with the South and his wife's people. He immediately submitted his resignation to the Secretary of War. On the day it became effective, April 3, 1861, he made arrangements for his family to spend some time with relatives, and he hurried on to Montgomery, the seat of the Confederate Government, to report to Jefferson Davis. Realizing that he was gaining the services of one of the most brilliant ordnance officers of the United States Army, Davis made him Chief of Ordnance on April 8th with the rank of Major. He was promoted through successive ranks and to Brigadier-General on November 10, 1864.

Within a week, on April 12, the first shots of the Civil War were fired. Young Willie, who was with his mother and sisters at the Armory at Charleston, was a witness to the very beginning of the conflict. His sister, Miss Jessie Gorgas, said that her mother told her the following about Willie's reactions: "Willie and I were sitting in the open window at the armory at Charleston, South Carolina, about nine o'clock, his little hand in mine, listening to the guns at Fort Sumter, the beginning of the Civil War. He seemed much impressed, and turning to me, said, 'Mother, isn't it solemn?'"

To the Confederacy, Josiah Gorgas proved a great aid. He was stationed at Montgomery for a short time but soon established headquarters in the arsenal at Richmond. The Gorgas family moved to Richmond where young Willie had almost daily association with one or more of the top generals, Albert Sidney Johnston, Robert E. Lee, Stonewall Jackson, Joseph E. Johnston, and others, as well as with the statesmen who were guiding the Confederacy. All of these experiences only made William more anxious to point to an army career. When General Lee surrendered on April 9, 1865, Gorgas, who had been raised

to the rank of Brigadier-General, accompanied the retreating army out of Richmond. Since Richmond was burned, Mrs. Gorgas and her six children found their way to Baltimore, Maryland, where friends cared for them. The family was reunited and moved to Brierfield, Alabama, in 1866 where they remained until 1868, when General Gorgas and Dr. John William Mallet, Superintendent of Confederate Ordnance Laboratories, attempted to open up a blast furnace. Both invested all of their savings and the venture proved a complete failure.

The University of the South, Sewanee, Tennessee, opened in 1868 and General Gorgas was named headmaster of the Junior Department. William had attended school in Greensboro, Alabama, and New Orleans while the family lived at Brierfield. He was fifteen when he entered the preparatory school at Sewanee in July 1869. It soon became apparent that he was not a good student but was more interested in baseball and other sports. In the meantime, his father had been appointed Professor of Engineering in 1870 at the same institution and in 1872 was elevated to Vice-Chancellor. However, in his last year at Sewanee Willie turned scholar and won the medal for scholarship from Alabama. He received the A. B. degree on August 5, 1875. While at Sewanee, young Gorgas still had a great desire for military life but his father discouraged him. To satisfy his father's wishes he spent a year studying law but he was so unhappy that the family agreed to seek an appointment to West Point. His father even forgot his personal pride and appealed to President Grant for a presidential appointment but without success. The campaign extended so long that young Gorgas passed his twenty-first year and thus was too old to gain admission to West Point. He was still set on a military career and there seemed to be only one way for him to get into the army and that was by way of the Medical Corps. Although he had never shown any interest in medicine, he was willing to endure any hardship to become part of the army.

The fall of 1876 found Gorgas enrolled in the Bellevue Medical College in New York City, receiving the M. D. degree in June 1879. He was surprised to find that his choice of a career was not as bad as he had expected and that he really was enjoying

the study of medicine. One of Gorgas' favorite teachers was Dr. William H. Welch who came to his aid in later years while he was at the Canal Zone. After an internship at Bellevue Hospital he entered the Medical Department of the U. S. Army in June 1880.

The next twenty years were more or less uneventful for Dr. Gorgas as a physician but he was stationed at different posts which gave him a chance to visit several sections of the country and meet many interesting people. In fact it was at one of these posts, Fort Brown, in 1882 that the commander of the post, Col. William J. Lyster, called Dr. Gorgas to treat his sister-in-law, Miss Marie Cook Doughty, who had contracted yellow fever. Miss Doughty soon passed the crisis and at about that time Dr. Gorgas developed the characteristic symptoms of yellow fever. His illness was shorter than hers and they convalesced about the same time. It was during this period that a romance developed but, unfortunately, her brother-in-law was ordered to another post so Miss Doughty left Fort Brown. Distance may have made the heart grow fonder but it slowed up this romance so much that the wedding did not take place until September 15, 1885.

Gorgas accompanied the military expedition against Santiago in 1898. Because of his previous experiences in treating yellow fever patients and possibly because he was immune, he was selected to be the sanitary officer of the city of Havana in 1898, a city that had not been rid of yellow fever for several generations. Gorgas and his squad of men really cleaned up Havana but that alone was not the complete answer. Dr. Carlos Finlay of Havana had presented a paper before the Royal Society in 1881 in which he suggested the theory of the transmission of yellow fever by means of the mosquito. This was thirty-three years after Nott had published his paper stressing the same hypothesis. However, it was not until 1899 that Surgeon General George M. Sternberg induced the Secretary of War to appoint a board of army medical officers headed by Major Walter Reed to investigate the cause of yellow fever and especially to investigate the claims of Sanarelli, an Italian scientist, that he had discovered the organism responsible for the disease. Reed's Board consisted of Dr. James Carroll, Dr. Aristides Agramonte and Dr. Jesse

W. Lazear, a group of unknown medical men. The Board soon disposed of Sanarelli's claim since the organism was identified as the hog cholera bacillus. Dr. Henry Rose Carter, who was acting as Havana's quarantine officer, had had some experience in treating yellow fever and studying its development. Dr. Carter made a study of a small yellow fever epidemic in Orwood, Mississippi, in 1898 and he had noted that not a single case of yellow fever developed among persons who entered houses within ten days or two weeks after its occupant developed yellow fever but that a high per cent developed the disease if they entered such a house after ten days to two weeks. Volunteers were requested for several experiments. However, Dr. Lazear, who had been left in charge while Dr. Reed returned to Washington, permitted an infected *Stegomyia* mosquito to bite him and he became ill a few weeks later and died. It was Dr. Gorgas who learned a few facts about the series of events which caused the illness from Dr. Lazear himself before he passed on. Dr. Lazear told Dr. Gorgas that the *Stegomyia* mosquito which had infected him had bitten a yellow fever patient within three days after the patient became ill and that ten days or longer had passed between the time that the patient was bitten and the time Dr. Lazear was infected.

On his return, Dr. Reed set up experiments which proved beyond doubt that the *Stegomyia* mosquito, since renamed *Aedes aegypti*, was responsible for spreading yellow fever. Reed's Board noted two very important conditions which must be present before mosquito transmission is possible. The first one is that the mosquito must bite the yellow fever patient within the first three days of his illness. The second condition, which confirmed Dr. Carter's observations in the Mississippi epidemic, was that the mosquito thus infected must then wait at least ten days before biting a second individual.

Dr. Gorgas had remained in the background as far as the Reed Board was concerned. Although the Reed Board had proved certain facts about the mosquito transmission of yellow fever, there still remained the problem of preventing further deaths by ridding Havana of the *Stegomyia* mosquito. Gorgas had not been marking time but had been making observations on the habits of this species of mosquito. He

had observed that they needed rain water for their larval stage and that the water must be in artificial containers and near a house inhabited by human beings since he never observed *Stegomyia* larvae in streams or water-filled holes made by animal hoofs. He also had noted that this species of mosquito seemed to stay within a small area. The female of this species is the one that bites and she was observed to prefer the soft tissues on the ankles and under the wrists. Also, she must have human blood before she could lay her eggs.

Fortified with the above knowledge about *Stegomyia* mosquitoes, Gorgas set about the task of cleaning up the city. He divided Havana into twenty districts and assigned to each one a Sanitary Department representative who was to inspect every dwelling each month, with orders either to destroy the breeding places or to render them ineffective as breeding places.

For each of the ten years previous to the American occupation in 1898, an average of nearly 500 people had lost their lives by yellow fever. This number was reduced to about 300 in 1900. The above campaign was begun early in 1901 and on May 22 Gorgas wrote to Reed in Washington and explained that they had had one death on March 13 and that since then six more cases had been reported. The October 8th report to Reed stated that the last case had occurred on September 26, the date that yellow fever ceased to be a factor in the health of Havana. The letters that passed between Reed and Gorgas display the confidence and respect that they entertained for each other. "The news from Havana is simply delightful." Wrote Reed on July 19th, 1901, . . . "It shows that your acquaintance with the local conditions was much better than mine; that you have succeeded in throttling the epidemic appears beyond question and it is to your everlasting credit. A man of less discretion, enthusiasm, and energy would have made a fiasco of it. Whereas you, my dear Gorgas, availing yourself of the results of the work at Camp Lazear, have rid that pest hole, Havana, of her yellow plague. All honor to you, my dear boy!" And Gorgas was just as generous with his felicitations to Reed. "Certainly," he wrote Reed on August 26, 1901, "the work of proving the mosquito to be the transmitter of yellow fever is as important a piece of work as has been done since

Jenner's time, and, as far as the United States is concerned, probably of more importance; and yours was the guiding hand . . . I am very happy to serve in the more humble role of being the first to put your discovery to extensive, practical application."

Because of the dramatic onset of the characteristic symptoms associated with yellow fever and its high mortality rate, many were not aware that malaria was responsible for several times the number of deaths due to yellow fever during the first two years of American occupation of Havana. Such facts kept Gorgas and his corps of sanitarians continually waging a campaign against the malaria-transmitting *Anopheles* mosquito, which prefers slow-moving, shaded streams as breeding places. The average number of deaths due to malaria during the first two years of American occupation was 1047 per year and in 1901 it dropped to only 151. The average for the next decade was 44 per year and in 1912 there were only four deaths attributable to malaria. Naturally, Gorgas had moved to the Canal Zone several years before the last statistics were compiled but the procedures that he had established deserve the credit.

The Panama Canal Convention was signed on November 18, 1903, and after its ratification by the government of Panama and the United States Senate, it was officially proclaimed as in full effect on February 24, 1904. The Canal Commission was packed with engineers who had little interest in health problems: Rear Admiral John G. Walker, Major General George W. Davis, William B. Parsons (builder of the New York subway), William H. Burr, Benjamin H. Harrod, Carl E. Grunsky, and Frank T. Hecker. The last four members were civil engineers. Although the American Medical Association made every effort to have Gorgas appointed to the Canal Commission, it was unsuccessful and Gorgas became merely the Chief Sanitary Officer with little real authority.

In spite of the membership of the Commission, those who realized the importance of sanitation had no reason at first to suspect an official hostility to it. Gorgas made a trip to Panama to survey the situation and returned to the states to make plans to arrange for a large staff of assistants and both adequate equipment and supplies. On approaching Admiral Walker, Chairman of

the Canal Commission, he learned that the staff which his official superiors proposed to furnish him was smaller than the absolute minimum which the job demanded. Time and time again, Gorgas pleaded with the Chairman for permission to take with him adequate supplies of wire screen, disinfectants, etc. He was told to go with his staff to Panama and look over the situation again and at that time make out an order for things they would need. Gorgas had little choice but to proceed in June 1904 to Panama with a small group of assistants which included Dr. Henry Rose Carter, Dr. John Ross, Dr. Louis Balch, Dr. Louis A. La Garde and Mr. Joseph A. LePrince. After landing, he promptly sent an order for needed supplies but it was not honored, which emphasized how little interest the Commission had in sanitation in Panama. Although Admiral Walker was on the ground and would listen to Gorgas about his needs, it was difficult to persuade him because the Admiral was convinced that the mosquito played no part in the transmission of yellow fever.

After several months spent trying to procure a larger staff and the necessary items, Gorgas decided to go to Washington and see whether he could get official action. Another reason he wished to make the trip was that Mrs. Gorgas was quite sick and was being treated in New York. Gorgas made the trip in the fall of 1904 and found that his wife had recovered sufficiently to accompany him back to Panama. Much of the time that Gorgas spent in Washington trying to get cooperation from high officials was without success.

During the fall of 1904, the laborers and white collar workers began to arrive in Panama. Their numbers continued to increase during the winter and spring and most of them were non-immune to yellow fever. When Gorgas and his staff arrived, the Panama strip was quite free of yellow fever. He had frequently warned the Commission, however, that they could not expect the condition to remain permanent but rather to expect a return of the deadly maldy at any time. And by April of 1905, the Isthmus of Panama was experiencing one of the worst epidemics of yellow fever in its history. Within three months, at least five hundred Americans had quit their jobs and left Panama. Many stayed because of the high cost of transportation. To make mat-

ters even worse, General George W. Davis, the only member of the Canal Commission who resided there, was Governor of the Canal Zone. He was a renowned engineer, who had built the Washington Monument, but who frequently took special pains to remind Gorgas that he had no faith in the mosquito-transmission theory and that yellow fever was due to filth. It was such a different story in Havana, where the Military Governor, Major-General Leonard Wood, a physician, quickly grasped the significance of the Reed Board and put the wealth and influence of the American Government back of Gorgas.

Having been rebuffed in its recommendation that Gorgas be appointed a member of the Canal Commission and alarmed by reports regarding the health of Canal workers, the American Medical Association quietly sent Dr. Charles A. L. Reed, surgeon of Cincinnati and former president of the American Medical Association, to learn firsthand about the conditions in the Canal Zone. He arrived on February 7, 1905. His report was so direct and critical of the Canal Commission that it resulted in President Theodore Roosevelt demanding resignations from all seven members. President Roosevelt appointed a new Commission but concentrated authority in an executive committee composed of Theodore P. Shontz, Chairman of the Commission; John F. Wallace, the chief engineer, and Charles E. Magoon, Civil Governor of the Canal Zone. The new Commission took over in May 1905 and the next month initiated efforts to remove Gorgas as Chief Sanitarian, since it did not agree with his views on yellow fever transmission. The Commission persuaded Secretary of War, William Howard Taft, to support it and nearly had President Theodore Roosevelt ready to remove Gorgas. President Roosevelt did not call for Gorgas' resignation but requested advice from his friend, Dr. William H. Welch, Dean of the Johns Hopkins University Medical School, and President of the American Medical Association in 1910. Dr. Welch explained that Gorgas was well qualified to conduct the work and that he should be kept on and given the necessary facilities to render the Canal Zone a safe place to live and work in. Welch's remarks halted Roosevelt's action against Gorgas but the President was not yet ready to agree with Welch that Gorgas should be

kept on as Chief Sanitary Officer.

So President Roosevelt sought advice from another member of the medical profession, Dr. Alexander Lambert of New York City, who was President of the American Medical Association in 1919. Dr. Lambert was one who had done his best to persuade Roosevelt to make Gorgas a full member of the original Isthmian Canal Commission. And as is frequently the case, one may depend a lot on the advice of a friend, especially if that friend is a regular companion in some sport; so Roosevelt listened to Lambert with whom he had been on several hunting expeditions. Roosevelt assured Lambert that Gorgas would be retained and that he would have ample support. That promise was kept and Shontz, the Chairman, was ordered to Washington and given instructions to accord full cooperation to Gorgas and the Sanitary Department. Also, at about the same time, Chief Engineer Wallace's resignation had been accepted and his successor, John E. Stevens, proved to be a defender of Gorgas and his work.

Possibly because of the importance of the Canal to America and the world at large and possibly just because he wanted to see it, President Roosevelt broke a tradition as old as our nation and made a personal visit to the Canal Zone in November 1906. Roosevelt sent a message to Congress praising the work of Gorgas and his staff and made many favorable comments about the hospitals maintained by the Sanitary Department. Gorgas was pleased with the President's message but there was trouble ahead.

Early in 1907, the Chief Engineer, John E. Stevens, resigned his post and, after consultation with Secretary Taft, President Roosevelt decided to appoint a new Canal Commission which was composed largely of Army officers who would be less likely to resign. Gorgas was made a member of this Commission along with Major W. L. Sibert, Joseph Bucklin Bishop, Lt. Col. George Washington Goethals, and five others. Really the Commission was a one man Commission, since, in his desire to increase efficiency, President Roosevelt had combined the position of Chief Engineer and Chairman and appointed Goethals to the dual post with veto power over all acts of the Commission as a whole. Goethals took over his duties on April 11, 1907 and it

was a fortunate thing indeed that the task for which Gorgas had been sent to the Canal Zone had in a large measure been accomplished. Gorgas kept up his enthusiasm for his program and never allowed his staff to relax their vigilance for a moment. His determination to preserve all the gains that his program had made was successful for at no time between the arrival of Goethals and the opening of the Canal was the progress of its construction seriously obstructed by sickness.

Gorgas is especially known for the control of yellow fever and malaria but his pneumonia control was almost as remarkable. For example, in 1906, the second year of the operation at the Canal Zone, there were 224 deaths due to malaria and 413 to pneumonia. In 1913 the number of employees had more than doubled, but only 47 lost their lives due to pneumonia. The fame of Gorgas' success in pneumonia control extended to the four corners of the world, and attracted the attention of a Mr. Samuel Evans of the Transvaal Chamber of Mines in South Africa. Mr. Evans visited Panama to view the situation firsthand and, as a result, Gorgas was invited to visit South Africa to study the working conditions in the diamond and gold mines. In company with Major Robert E. Noble and Dr. S. T. Darling, Gorgas arrived at Cape-town on December 2, 1913, and took the train to Johannesburg. The group visited the mines where men were at work and inspected more than fifty hospitals. Living quarters were inspected, the sources and preparation of the food were studied, and recruiting conditions observed. The pneumonia studies were brought to a temporary halt because of a strike so Gorgas accepted an invitation from the government of Rhodesia to visit the capital city and suggest methods for curbing malaria. Soon after his arrival in Rhodesia, Gorgas paid a courtesy call upon Sir William Milton, Governor of Rhodesia. The latter, to Gorgas' surprise, presented him to Lady Milton as "General Gorgas," giving him an official rank much higher than the colonelcy to which he had been promoted some time before. Gorgas tried to explain to Sir William that he had made a mistake in his rank. Then Sir William smiled and insisted that "General Gorgas" was correct. Finally, Sir William took from his pocket a news bulletin which had just arrived. The news item

stated that President Wilson had appointed Gorgas, Surgeon General of the United States Army.

An editorial in the *Journal of the American Medical Association* expressed general feeling about President Wilson's selection of a Surgeon General: "Probably not since the days of the Civil War has it been possible for a President to make an appointment that will cause so much general satisfaction." Gorgas was anxious to get home to begin his new work so he left South Africa on February 28 after handing his report to the Transvaal Chamber of Mines. Before he boarded ship, he had received an invitation to address the Royal Society of Medicine after which a reception would be held in his honor. The famous Sir William Osler described Gorgas' reception as "the greatest ever accorded a medical man in England." The *London Daily Mail* praised him in an editorial: "Perhaps of all living Americans he had conferred the greatest benefits on the human race. The whole world, particularly the British Empire, with its large tropical possessions, owes him a debt which Britons are proud to acknowledge." Perhaps Gorgas was more highly pleased by one special event than all of the others during his brief visit in England. Oxford University held a special convocation to confer the honorary degree of Doctor of Science upon him on March 23. The citation was delivered by Oxford's acting Vice-Chancellor, Dr. T. H. Warren.

Just about four months before the outbreak of World War I, Gorgas assumed his new duties as Surgeon General of the U. S. Army, with the rank of Brigadier-General on April 6, 1914. In recognition of his many profound achievements in sanitation, he was elevated to Major-General by a special act of Congress on March 4, 1915. Realizing the probability of eventual American participation in World War I, he started preparing for it soon after the war began. He was especially concerned with the threatened shortage of certain drugs such as opium and quinine. He played a very active part in drafting the National Defense Act of 1916 which had several very important sections, such as the Council of National Defense and the Advisory Commission, with Dr. Franklin H. Martin representing the medical profession. Like the other members of the Advisory Commission, Dr. Martin was authorized to appoint outstand-

ing men in his field as his personal advisers.

Martin selected seven men for his group and the group was known as the Medical Committee of the Council of National Defense. The Committee was composed of Surgeon General William C. Braisted of the Navy and President of the American Medical Association in 1920; Surgeon General Rupert Blue of the U. S. Public Health Service and President of the American Medical Association in 1916; Col. Jefferson R. Keen, Director General of Military Relief of the American Red Cross; Dr. William H. Welch, member of the National Research Council and President of the American Medical Association in 1910; Dr. William J. Mayo, Chairman of the Committee of American Physicians and Medical Preparedness and President of the American Medical Association in 1906; Dr. Frank F. Simpson, Chief of the Medical Section of the Council of National Defense and Secretary of the Committee of American Physicians for Medical Preparedness; and Surgeon General Gorgas.

Then there was the General Medical Board which was formed to serve as a liaison body to secure cooperation between the Army, Navy and the Public Health Service on the one hand and the civilian physicians and surgeons on the other. The personnel of the Board included all of the members of the Advisory Commission except Dr. Welch and, in addition, Dr. Cary T. Grayson, personal physician to the President; Dr. Charles H. Mayo, President of the American Medical Association in 1917; Dr. Frederick A. Beasley, Professor of Surgery at Northwestern University; and Dr. Victor C. Vaughan, Dean of the Department of Medicine and Surgery, University of Michigan and President of the American Medical Association in 1914.

Because of Gorgas' leadership and planning, the above agencies were successful in expanding the Army Medical Corps from less than one thousand commissioned officers in 1917 to over thirty thousand by November 11, 1918.

Gorgas assembled about him another group of eminent physicians and surgeons who helped him safeguard the health of the soldiers. Gorgas had prophesied earlier that this country could participate in a large-scale conflict in which disease would not kill more men than bullets. He meant

to prove his prophecy and with the aid of the various groups he set about his difficult task. The lax sanitary practices which had permitted various diseases to flourish in other wars were to be out of the picture. However, the fast growing army and the slow construction of training camps resulted in overcrowding which helped to contribute to a great amount of sickness and many deaths before any of our soldiers landed in Europe. Gorgas personally visited every camp to learn about local conditions first hand; often the visits were unannounced and usually he would eat a meal with the troops without warning too. This great sanitarian assumed it to be his personal charge to see that sanitation in all forms should be of the first order in the armed forces. At each post he inquired about or inspected the water supply to be used for beverages or dish washing purposes, the screening of the mess halls and kitchens, iceboxes, and the sources of food. Rules and regulations which came continually from the Surgeon General's office touched upon many phases of army life as the following samples indicate: each soldier was required to have an individual drinking cup and moreover to keep it clean; water for washing dishes had to be kept at a sufficiently high temperature to prevent the transmission of disease; the food peddler was banned from all military camps lest soldiers be made sick by food which had been prepared or distributed in an insaniary manner; foods had to be inspected before they could be served; canned foods must be served the day they were opened; iceboxes had to be elevated and the drip pans emptied and cleaned every day; and camp sites must be provided with artificial drainage.

Late in the fall of 1917 it seemed that the realization of Gorgas' dream of an army practically free from preventable diseases was to be left as the charge to some future Surgeon General. Reports reached Washington that there were epidemics of pneumonia, meningitis and measles in several of the camps. The writers for daily newspapers were highly critical and suggested immediate action to correct the conditions. Something was definitely wrong and both Gorgas and his superiors were worried. In order to learn the facts, Gorgas made an inspection of four camps: Camp Bowie, Camp Doniphan, Camp Funston, and Camp Sevier. He found that, of the four camps,

only Camp Funston had a base hospital completely ready to take care of the sick soldiers. His superiors were not only willing but had sent men to three of these camps without hospital facilities and trusted to luck that the men would remain healthy until such facilities could be constructed. The inability to obtain consideration from the "higher-ups" and their determination, in spite of his urging, to construct and equip practically every type of building ahead of hospitals was brought to the attention of the Senate Military Affairs Committee at a hearing in January 1918. Appearing as a witness, Gorgas informed the Committee that Secretary of War Baker had been among those disregarding his warning against crowding. He stated that at some camps the hospitals were still not ready to receive patients although war had been declared nine months before. The Surgeon General had another complaint against the War Department, the failure to provide hospital ships which he had recommended several months earlier. When the Surgeon General was asked by the Chairman whether he personally, as head of the Medical Department of the Army, was consulted in regard to the selection of camp sites, he replied: "No, Sir. I was not." The Chairman raised the question of overcrowding in a regulation army tent and asked Gorgas what he thought was the maximum number of men who could live in one without danger to health. Gorgas explained that he originally had recommended sixty square feet of floor space per soldier but that due to costs had reduced the figure to forty-five.

Those in attendance in the committee room seemed to be of the opinion that Gorgas' official conduct had been such that it deserved no censure. Among the disapproving minority were a number of the Surgeon General's official associates in the War Department. The New York Times on January 27 in an editorial, "General Gorgas Unheeded," defended Surgeon General Gorgas and referred to the fact that Secretary of War Baker had disregarded Gorgas' advice which resulted in an unnecessary increase in the death rate of soldiers. Less than two months after he emerged from the senatorial inquiry, the Surgeon General found himself in another bitter conflict which was making headlines in all sections of the country. It developed out of his own belief that officers of the Medical

Reserve Corps were being unfairly discriminated against by service regulations which provided that members of the Corps could never attain higher military rank than that of major. Gorgas and many of the leading medical men who felt as he did decided to go before Congress and explain the situation. They requested Representative L. C. Dyer and Senator R. L. Owen to introduce simultaneously in their respective bodies identical bills providing that officers in the Medical Reserve Corps be eligible to all ranks corresponding to those open to medical officers in the United States Navy. The immediate support of President Wilson was obtained and he wrote letters to the Chairmen of the House and Senate Committees on Military Affairs urging passage of the measure. Even the Secretary of War, Newton Baker, to whom the Surgeon General had directed criticism about his failure to build hospitals, promised his support.

The Owen-Dyer bill had many opponents, including the General Staff and the War College. Several members of the Medical Reserve Corps supported Gorgas in his efforts to have the bill passed but opposition continued to grow. Even President Wilson became less enthusiastic for the bill because he felt that it would create a Medical Corps with too many general officers. The strength of the opposition was so great that the bill was rewritten. The revised bill was passed by both houses of Congress on July 9, 1918. It was especially gratifying to Gorgas that the modified bill still preserved the principle for which he had fought: that Medical Reserve Corps officers are eligible for ranks accorded to members of other branches of the Reserve Corps of the Army.

While this struggle was taking place, Gorgas' friends and admirers became aware that he would reach his sixty-fourth birthday on October 3rd and that he would automatically be retired as of that date unless President Wilson would intercede for him. All indications pointed to many more months of conflict, with emphasis placed on the maintenance of high health standards for the army, so they were convinced that Gorgas should be kept at his post until the end of the war. Medical societies were quite active in taking action as early as May of 1918, urging President Wilson to appoint Gorgas as Surgeon General as long as the conflict lasted or as long as he should

be physically able to perform the duties of that office. The press joined in the effort too, but to no avail. On the eve of Gorgas' sixty-fourth birthday, President Wilson named Major-General M. W. Ireland as his successor.

Soon after his retirement, Gorgas, who was a member of the Board of Directors of the Rockefeller Foundation, accepted an appointment as Director of the Yellow Fever Commission of the International Health Board. Then he made plans to go to South America to eradicate yellow fever from those areas where it was endemic. Guayaquil, Ecuador, seemed to have more yellow fever than any other area so he made his headquarters there. After establishing his sanitation methods in Ecuador, he moved on to Lima, Peru, where he set up another campaign against the *Stegomyia* mosquito. At the conclusion of his stay in Ecuador and Peru, Gorgas expressed confidence that the sanitary measures already instituted under his supervision would result in the eradication of yellow fever from these areas. This proved true within four months after he began his campaign against the *Stegomyia* mosquito. Since his program was making such rapid progress in South America, Gorgas made plans to go to Africa, where he had heard rumors that yellow fever had broken out in several areas of the Belgian Congo. On May 8th, 1920, he sailed for Europe, en route to the west coast of Africa to investigate the status of the disease in that region. While en route he had a paralytic stroke in London on May 30, 1920 and died a few weeks later on July 4th. A short time before his death, King George V learned of the seriousness of Gorgas' illness. He went to the hospital to see him and presented him with the insigne of the Order of St. Michael and St. George.

"General Gorgas," the King said to him, "it gives me very great pleasure to present you with the insigne of the Order; and believe me, I very sincerely appreciate the great work which you have done for humanity—work in which I take the greatest interest."

His distinguished services to mankind were recognized by institutions, scientific and medical societies, and governments of several countries. At home, not only was he Surgeon General of the Army with the rank of Major-General but he was honored by being elected President of the American

Medical Association in 1909. Only one other Surgeon General of the Army, Dr. George M. Sternberg, was so honored. Gorgas served as President of the American Society of Tropical Medicine in 1910. He was awarded honorary degrees by many universities in this country and England. A number of special medals were awarded him, including the Mary Kingsley Medal of the Liverpool School of Tropical Medicine, the Dawson Medal of the University of the South, the Gold Medal of the American Museum of Safety, the Public Welfare Medal of the National Academy of Sciences, the Harben Gold Medal of the Royal Institute of Public Health, London, the Buchanan Medal of the Royal Sanitary Institute, London, and the Distinguished Service Medal by President Wilson.

Among the decorations given him by foreign governments were the Order of the Star of Belgium by King Albert, the Legion of Honor by the French Government, Grand Cross of the Order of the Crown of Italy, and the Cross and Star of Knight Commander of the Order of St. Michael and St. George by King George V of England.

Thirty years after his death, this distinguished son of Alabama was elected to the Hall of Fame at New York University and a bronze bust of Gorgas was unveiled there on May 24, 1951.

The personality of Surgeon General Gorgas was so well portrayed by the Honorable Newton D. Baker, former Secretary of War, in an address delivered at the Gorgas Memorial Service held in Washington, D. C. on January 16, 1921 that the following quotation from his address is deemed particularly suitable:

"It was appropriate that he should die on foreign soil, for he had become a citizen of the world. . . . I like to think that his death was as he would have wished it to be . . . pressing forward with his face to the front, seeking still to pursue and conquer the enemies of human happiness and health; retired, but not resting; full of years, but still full of energy; almost unaware of the laurels he had won, in his eager impatience to render further service to his fellowmen. Physician and Soldier—he fought a good fight and won the only kind of victory that counts; he added years to the length of human life; he freed countless multitudes from sickness and premature death; he served his generation and won a place in

the lasting memory of all mankind; and withal, he was a modest gentleman—this Physician, this Soldier."

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A normal roentgenogram of the chest at the age of forty in no way precludes the possibility of finding progressive reinfection tuberculosis at a later date.—E. M. Medlar, *Am. Rev. Tuberc.*, March 1955.

The dramatic disappearance of Pott's disease (tuberculosis of the vertebrae), the precipitous drop in human brucellosis in urban populations, and the decline of other milkborne human diseases, including typhoid fever, summer diarrhea, diphtheria, and streptococcal infections, are self-evident. Pasteurization cannot take credit for all of the decline of those diseases among men, but it has been a sizable factor and in some cases the most important single public health practice.—James H. Steele, D. V. M., *Pub. Health Reports*, November '54.

JOURNAL EXCERPTS

Coroner Calls for More Autopsies—A physician coroner said recently that his fellow medicolegal officers should perform more autopsies, and gave an index for measuring officers' efficiency.

A coroner should perform between 20 and 25 autopsies for every 100 deaths in his community, Dr. Henry W. Turkel, coroner of the city and county of San Francisco, said in the August 27 Journal of the American Medical Association.

That is the proportion of deaths generally agreed to need medicolegal investigation. However, there has been no agreement on what proportion of these should be autopsied as well as investigated. Dr. Turkel said all of them should.

Autopsy is the only certain way to find a true cause of death, Dr. Turkel said. Autopsies often uncover crimes and violence which might have passed unrecognized. They also help insure fair decisions in civil liability cases, and can expose contagious and reportable diseases, which are of concern to the public.

Few communities have an autopsy rate of 20 to 25 per cent. The low rate would indicate that medicolegal officers are yielding to expediency by accepting superficial evidence and bending under pressure, or are bound by budget matters. In addition, there is often public resistance to autopsy.

A coroner's office usually has been judged on the basis of the percentage of medicolegal cases given autopsy. But that rate "is utterly meaningless in itself," Dr. Turkel said, for a coroner may accept only a few cases, yet perform autopsies on all, or he may accept many cases and perform only a few autopsies.

Dr. Turkel said a study of 400 consecutive cases handled by his office showed that a large percentage of deaths would have been attributed to wrong causes if no autopsy had been done.

The autopsy rate of a community can be improved, Dr. Turkel said, by convincing the public of the need for and the usefulness of autopsy. The percentage index is the best way to show if and where improvement is needed in the existing setup.

The author listed the types of death requiring autopsy if the highest possible standards are to be met.

They include violent deaths with possible criminal liability; violent or accidental deaths with possible civil liability; deaths without previous medical attention or no knowledge of events before death; deaths after known illness but no knowledge of events preceding death; deaths in which the attending physician can find no cause, and unexpected deaths.

Deaths to which there are lay witnesses who can describe symptoms and events preceding the death also must be investigated. A cause of death based only on a lay witness' report is both medically and technically inexact, the author said.

In all of these types "there is a reasonable possibility that crime or violence will be exposed by autopsy," Dr. Turkel said. In addition, autopsy may reveal that deaths thought due to violence or accident are actually of natural causes, thereby relieving some person of civil liability or moral responsibility.

Physician Doubts Existence of "Ulcer Personality"—Doubt as to "the nature or even the existence of a specific ulcer personality" has been expressed by a Cleveland physician.

It has become common in the last few years for doctors and the public to refer to certain persons as being of the "ulcer type." Articles and even a book have been written on the subject.

Yet investigators cannot agree on what goes to make up the "peptic ulcer personality," Dr. Harold P. Roth said in the July Archives of Internal Medicine, published by the American Medical Association.

He found that a number of different personalities were described as typical in various studies on the topic. "There was no whole personality or feature of personality that was agreed upon by as many as a third of the investigators," he said.

Personality traits most frequently mentioned were drive, conscientiousness, and anxiety. "Although other traits were described, the statements about most of them were contradictory," he said.

Some authors suggested that ulcer patients had a specific type of conflict. But they did not always agree on the nature of the conflict nor whether the conflict was associated with a specific personality type.

The conflict most frequently reported was between feelings of passivity (desire to be loved and taken care of) and feelings of activity and independence. Because this same conflict is seen in persons without ulcers, "we must know how often this conflict can be found in the general population before we can decide how significant is the fact that it is found in ulcer patients," Dr. Roth said.

"We cannot say whether the fact that a number of investigators described the same personality features is significant, for this may be due to a defect in their technique," he said.

In half of the studies no method of study was outlined. Some were based on interviews, psychoanalysis, and psychological testing.

No distinction was made between patients with gastric ulcer and those with duodenal ulcer nor between male and female patients in many of the studies. Yet investigators who studied these groups separately found there were differences in personality.

"Conclusions about the ulcer personality in the general population have been drawn from studies of samples that were not representative," Dr. Roth said.

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THE MONTH IN WASHINGTON

Although very little health legislation actually was enacted in the first session of the 84th Congress, a number of important bills made enough progress to insure they will get serious consideration when the second session starts next January.

Foremost is a bill to amend the social security act, and, among other things, provide Old Age and Survivors Insurance payments for disabled workers after age 50. The present provision (enacted in 1954) protects a disabled worker's pension so it is not decreased because of his years of unemployment, but payments don't begin until he reaches 65.

The new plan, sponsored by Democratic members of the House Ways and Means Committee, was rolled through the House after closed committee hearings. But when it got to the Senate, Chairman Harry Byrd of the Finance Committee held it up, saying it was too important to be reported out without the complete hearings he plans for next session.

The American Medical Association is flatly opposed to cash disability insurance. One important reason is the Association's conviction that federal machinery necessary to regulate disability examinations inevitably would project the government into the medical care field. There are many other reasons, including the relationship between cash payments for disability and the patient's interest in rehabilitation. The issue of disability pensions will be settled next year in the Byrd Committee or on the Senate floor.

A bill for \$90 million in grants for building and equipping non-federal research facilities passed the Senate, and is awaiting action in the House Interstate and Foreign Commerce Committee. Hearings have been held on a bill for U. S. grants to medical schools and on another (Jenkins-Keogh) to allow self-employed persons to defer income tax payments on part of their income put into annuities.

Other bills that will be ready for action in January include legislation to stimulate nursing education, improve the medical care of military dependents, authorize health insurance for government workers, authorize U. S. guarantee of mortgages on health facilities, and offer military medical scholarships. The administration's bill for

reinsuring health insurance plans by now is a little shopworn, but it still might be pushed again next year.

President Eisenhower has made it known he wants Congress to get to work on health legislation early next session. His urging might not be needed. Next year is a presidential election year, and both parties will exert themselves to enact, and take credit for, new health programs that carry public appeal.

Despite the hundreds of hours of hearings in Senate and House, not a single important permanent medical program was set up by Congress in the last session. A national mental health survey, supported by the AMA, was enacted, but the administration's plan for mental health grants will be up for action next year.

Ignoring protests of physicians and dentists, Congress extended the doctor draft act for another two years, after first adopting two amendments. It exempted all men over 45, and all 35 or older who previously had been rejected for medical commissions for physical reasons alone.

For almost four months congressional committees pondered what to do about Salk poliomyelitis vaccine. At first there were two main questions: 1. How much money should Congress spend to buy vaccine for free shots, and who should get them? 2. How far should the federal government move into the picture to insure equitable allocation?

One of the proposals—this even got through the Senate—was to offer unlimited money to the states, which in turn could give free shots to any persons or group of persons under age 20. President Eisenhower's idea—which he urged on Congress several times—was simply to insure that no person in need of the vaccine would go without it for financial reasons. Eventually his view prevailed and the states now are drawing on a \$30 million fund. This law expires next February 15.

As weeks passed, there was less and less enthusiasm for setting up a federal allocation system, which Secretary Hobby and Surgeon General Scheele repeatedly told Congress wasn't needed. Consequently, when the National Foundation announced it had all the vaccine it needed for its program, a voluntary allocation plan was put in effect. The plan has the support and

cooperation of physicians, pharmacists, drug manufacturers, and the state health officers. The Department of Health, Education, and Welfare is the liaison between the pharmaceutical houses and the states, dividing the vaccine on the basis of the number of unvaccinated persons in the eligible age groups.

EXHIBIT ON UTERINE CANCER TEST AVAILABLE

The importance of the cytologic test for uterine cancer as a diagnostic aid in routine office practice is explained for physicians in a new exhibit available to medical groups on loan from the National Cancer Institute of the Public Health Service, U. S. Department of Health, Education, and Welfare.

The exhibit was shown for the first time at the American Medical Association meeting at Atlantic City, N. J., in June. It reports the results of the cytologic test as applied to 70,000 women in Memphis and Shelby County, Tennessee, under a project conducted by the National Cancer Institute with the cooperation of local medical and public health groups to demonstrate its value as a case-finding procedure in large populations.

The Memphis project produced a case-finding rate 40 times that previously observed in the community, and 88.3 per cent of the intra-epithelial carcinomas of the cervix discovered were unsuspected. Of 1,076 biopsies completed among 70,000 women tested, 544 were positive and 369 negative (the rest being borderline, suspicious, or inadequate).

One of the most important facts revealed by the Memphis data was that intra-epithelial carcinoma, or preinvasive "carcinoma-in-situ" in the stage considered practically 100 per cent curable, was found most often in women of the 30 to 35 age group. Invasive cancer, on the other hand, was found most often in the 50 to 55 age group.

In addition to presenting these data, the National Cancer Institute exhibit illustrates the aspiration method of taking a vaginal smear for cytologic examination. A folder explaining this procedure in detail, which is helpful in training nurses or medical technologists, is also available from the Institute.

THE DRUG OF CHOICE IN AMEBIASIS

According to Dwork (Am. J. Gastroenterol. 22: 152, Aug. 1954), the drugs that are in widest use in treatment of amebiasis today are the following:

1. Antibiotics: Aureomycin, Terramycin and Fumagillin.
2. Iodoxyhydroxyquinolines: Diodoquin, Vioform and Chiniofon.
3. Arsenical: Carbarsone.
4. Bismuth-arsenic: Milibis.
5. 4-aminoquinoline: Chloroquin.
6. Alkaloid: Emetine.

The use of antibiotics began in 1949 when McVay and his colleagues discovered the usefulness of Aureomycin in amebiasis. At that time satisfactory but not total rates of cure had already been obtained with carbarsone, Diodoquin, Vioform and chiniofon. The effectiveness of antibiotics cannot be denied, but their limitations are equally apparent to the critical observer. For example, most physicians have observed side effects which are sometimes severe and surprisingly persistent following discontinuance of the drug.

The initial enthusiasm following the results of short term study of these drugs was somewhat tempered as recurrences were detected among the patients followed for four or more months. With any drug used in treating amebiasis, a relapse rate of 10 or 20 per cent is usually found when cases are followed adequately.

The latest antiamebic product of the mold is fumagillin, which is amebicidal in vitro in extremely high dilution. It produces undesirable, although not serious, side effects, and the rate of cure is high, but not total.

How do the iodoxyhydroxyquinolines compare with the antibiotics? Out of 152 adult patients treated with Diodoquin by the author, 16 (11 per cent) showed positive stools at some time after treatment. Six of these 16 cases, however, had inadequate doses of the drug. The cure rate with Diodoquin was, therefore, over 90 per cent in adults. Similar results were obtained with 57 children. The author's impression is that Diodoquin is the most dependable of these quinoline compounds, and that Vioform is somewhat more effective than chiniofon.

The choice in any given case should be dictated by such considerations as previous failure of a given amebicide, history of sensitivity, severity of symptoms, presence of hepatitis, necessity for rapidity of treatment, certainty of diagnosis, and the financial status of the patient.

In choosing a drug one should not prescribe any of the "mycin" antibiotics for the patient who has a history of nausea, vomiting, diarrhea, abdominal pain, or anal pruritus following his previous use of that drug. For general use, Diodoquin is a good amebicide and does not usually cause side effects. Milibis is a satisfactory general amebicide although the failure rate in children seems to be high. Treatment with Vioform results in a higher incidence of gastrointestinal symptoms. Fumagillin is a potent amebicide and its exact place in the scheme of treatment must await continued evaluation. Aureomycin and Terramycin are effective amebicides but their use is attended with a high incidence of undesirable side effects and they are expensive. Terramycin may be the most efficient of these two.

In broad perspective, perhaps most of the cases seen in this country will best be managed with a course of Diodoquin or carbarsone. A certain number will do well on fumagillin, Terramycin or Aureomycin; or with penicillin or sulfasuxidine followed by Diodoquin in sicker patients; the seriously ill cases should be given emetine either before or concurrently with the standard amebicides.

For amebic hepatitis, chloroquin is employed. One of the standard drugs efficient against intestinal amebiasis should always be given concurrently or after completion of the course of chloroquin.

The cold war against tuberculosis calls for a clear-cut program for the future. It is regrettable that, in our satisfaction with the fall in death rates, we may have given the impression that tuberculosis is conquered. In fact, some in authority have said that the fight is as good as over and that there will be no tuberculosis problem in ten to twenty years. This breezy optimism is founded on lack of knowledge and misunderstanding of the problems involved. Tuberculosis, while it has lost many of its death-dealing features, is still the greatest single cause of loss of man-hours in young people and still disrupts thousands of homes.—George J. Wherrett, M. D., *Nat. Tuberc. A. Tr.*, May 1954

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

LET'S PAY BACK SOME OF THE COSTS OF OUR MEDICAL EDUCATION

Henry G. Hodo, M. D.
Chairman of the Association's
A. M. E. F. Committee

A few weeks ago a more or less recent graduate of medical school gave as his reason for contributing to the American Medical Education Foundation the fact that he wanted to pay back the cost of his medical education. This is certainly a worthy and ambitious objective and something we should all think about.

It is estimated that the actual cost of four years in medical school is ten to twelve thousand dollars. Only about one-fifth of this amount is actually paid in the form of tuition. The remainder is paid from state or local grants or from endowment income and from contributions. In order for the medical schools to maintain their present high standards and to meet the more complicated training techniques arising out of recent scientific advances, we must do our part in helping foot the bill.

We can help pay back the cost of our medical education by contributing generously to the American Medical Education Foundation. Why not do it now?

ET TU, PHYSICIAN

W. A. Dozier, Jr.
Director of Public Relations

Before apologizing for being corny in selecting a title, it perhaps would be advisable to point out what caused such a selection.

A recent editorial by Mr. Thurman Sensing in the *Southern States Industrial Council Bulletin* was entitled "It Happened in Virginia." The first five paragraphs read as follows:

"For at least twelve years—perhaps for twenty-one years—the public school teachers of the State of Virginia, Grades I-VII, have used as their official teaching guide a course of study strongly promulgating the doctrine of socialism. This was the *Course of Study for Virginia Elementary Schools* issued by the State Board of Education in 1943, revised from a previous edition pub-

lished in 1934. It was only exposed on March 8, 1955.

"How could this have happened in Virginia—of all states—a state noted for its sound economic government, for its conservative leadership?

"The answer is that it happened just like a lot of things have happened in the whole country in the last quarter century.

"American businessmen, generally speaking, are the finest businessmen in the world. This has been demonstrated by our ability to produce the material goods necessary to win two world wars. It is demonstrated by our standard of living. It is demonstrated in many other ways.

"But also, generally speaking, American businessmen have paid perhaps too much attention to their business and certainly too little attention to affairs around them. Outside their own field, they are too often apathetic, indifferent, uninformed. They pay little attention to politics; yet they furnish the money the politicians appropriate, and the rules under which they live are made by the politicians. They pay little attention to what is taught their children in the public schools; yet their taxes pay the salaries of the teachers, and what their children are taught will determine the future course of our country. And so on down the line."

Further along in the editorial, Mr. Sensing takes a look at what was contained in the course of study. He points out that the children "are asked to collect data 'showing how governmental control has decreased the death rate caused by certain diseases,' but there is nowhere any suggestion that private medical research has played any part in this."

In closing Mr. Sensing says, "Free enterprise can take a 'hands off' attitude in these matters—and be destroyed. Or it can accept the responsibility for preserving itself—and thereby continue to increase the living standard of present and future generations."

Without belaboring the point, does not the title seem appropriate?

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

BEWARE OF THE BLACK WIDOW SPIDER

Contributed by
Nadine Pitts, Director
Division of Public Health Education

It is one of life's ironies that objects and things of beauty can give a great deal of pleasure, but that many of them—at the same time—can be capable of so much harm. The black widow spider, for instance, is an insect of striking beauty. But she is capable of causing great unhappiness to human beings. You no doubt have heard about her power to poison people who come within her small world. Although the venom of the black widow spider may never have entered your body, you may have friends or acquaintances who have been caused a great deal of pain by her bite.

Anyone who has seen a black widow spider attests to her beauty. In fact, many persons say that this insect is strikingly beautiful—in her own way, of course. Strictly speaking, no insect can be beautiful in the same way that a woman may be, for instance. Each class of living things has its own standards of beauty.

Unfortunately, most of the people who suffer at the hands of the black widow spider may not be able to describe the insect. For they often do not see the spider at the time that they are bitten.

This beautiful enemy of man has been called America's most poisonous spider. But man is not her only victim. Her very name, or nickname, comes from a cannibalistic trait. She has the habit of capturing and feeding on the much smaller male of her species whenever the opportunity presents itself.

Black widow spiders are distributed widely in the United States. They have been found in almost all states. However, they are perhaps more common in Alabama and other southern regions, although they are reportedly invading large cities. A Chicago newspaper had a story a few years ago about a black widow spider that had

been found on the fifteenth floor of a Cincinnati office building! It was formerly believed that the insects were found in greatest numbers in such out-of-the-way places as attics, cellars and outdoor privies. However, they have also been found in beds, garages, automobiles, tents, and in the shrubbery foliage decorating city lawns.

The average black widow spider is about the size of an old-fashioned shoe button, although some are much larger than that. A few have been found that measured one-half an inch in length or even more. As the name implies, she is black. Her body has a high sheen, reflecting light much like a highly polished floor.

However, her name might be misleading, for the black widow is not totally black. A crimson-yellow-edged spot shaped like an hourglass appears on her abdomen. The same kind of spot has been found to be present on the back of some specimens, as well. And in rare instances, the back may have two such spots. Most often, the spots are a bright red in color, but they are sometimes yellow. With this color variation in spots, the insect's shiny blackness is perhaps the most outstanding physical characteristic.

The black widow is a very poor housekeeper, or rather a poor web-spinner. The sloppy web she spins looks like the work of a rank amateur. One public health worker observed some time ago, "It (her web) is about as different from the web of any other spider as a cabinet or chest made by an expert craftsman is from one made by a jack-leg carpenter."

However, the black widow's web serves quite satisfactorily its primary purpose. Every spider web is designed specifically to snare flies and other insects for food. Perhaps the black widow's web need not be as good as those of other spiders because she, unlike many others, eats the male of her own species and hence does not eat as many other insects.

Those who have studied the beautiful black widow have noticed that she exhibits a great deal of patience. They have watched her for long periods of time. And unlike many other spiders, she does not

dart from place to place in her web. Rather, she "stays put." She takes a position near the web's center, where she remains virtually motionless for a long time. However, when an occasion calls for action, she is off with a start. If a fly or some other insect becomes enmeshed in the coarsely woven strands of her web, she goes into action, biting the insect furiously. If this action is not effective, she puts the web to work for her. The black widow begins a game of skilful maneuvering to enmesh the victim in the web's strands. Then, the insect is helpless, and incapable of defending itself. It is then a simple matter for the black widow to kill and eat her victim.

Strangely enough, the black widow is not as vicious in her feelings toward human beings as she is toward those of her own kind. She actually steers clear of people, and if she considers that she has much of a choice, she would much rather not bite them! The persons she does bite usually frighten her, or make her "think," in her way, that she is being hemmed in and prevented from escaping. The fallacy of her "thinking" is evidenced by the fact that practically none of the human victims knows she is anywhere near at the time. The black widow's bite often takes place when a person rams his hands into dark corners or walks over spots that he cannot or does not see.

The fact that many persons are bitten by this poisonous spider without knowing when or how it happens makes the injury a special problem in diagnosis. Moreover, the initial sting is mild and is followed by a latent period before the severe symptoms occur. If the patient recalls the sting, close examination by the doctor will reveal the site of the bite. The bite may vary in size—often it is smaller than a matchhead, but it may also be the size of a quarter.

According to one North Carolina doctor, the severity of the symptoms appears to be related only to the amount of venom injected by the spider, and perhaps to the individual susceptibility of the patient. Pain is one of the first symptoms. The pains usually start in the bones, muscles and joints. If an arm or leg is the site of the bite, the pain usually starts in that extremity and rapidly travels to the back and the abdomen, where it settles and predominates. The abdominal pain is usually so severe that it will mask all other pain. The

patient may be doubled up and thrashing, shock may or may not be present, and there may be vomiting, although it is rarely severe. The abdomen is frequently rigid, or like a board. When this symptom appears, many patients have been mistakenly subjected to surgery—that is, if the spider's bite is unknown to the doctor or the patient.

Other symptoms which may appear are cramps, difficulty in breathing, dizziness and skin rash. A few victims have been known to have convulsions as a result of the black widow spider's bite. While a child or an adult may have such convulsions, a child is more likely to have them.

In addition to all these reactions, the spider's venom may affect the nerves. In many such cases, the victim becomes highly nervous. If his temperature were taken shortly after the spider's bite, it would almost certainly register subnormal. But that is only a temporary condition. The bite, also, is almost always accompanied by a sharp increase in the pulse rate. However, a rapid pulse rate is not an unusual symptom, for it can be caused from many things, ranging from a simple emotional upset to a serious illness.

The person who is bitten by a black widow spider should seek medical treatment at the earliest possible moment. The condition is far too serious to take a chance with self-medication. Whiskey is one type of self-medication. Although you may have heard that alcohol is a prime medicine for spider poisoning—and for snake bite—it is the one thing that should not be taken. One public health official expressed himself emphatically on this point: "This (whiskey) or any other alcoholic beverage is just about the worst possible medicine for both and should never be resorted to under any condition." In fact, a 1935 issue of the *Journal of the American Medical Association* reported fatal results from alcohol used for a black widow bite.

The fact that the black widow's bite is poisonous for man has been recognized for centuries. However, many people have been skeptical that the insect could, by its bite, produce terrifying generalized symptoms in man. But research in the 1920's and 1930's in America dispelled all doubt concerning the black widow's menace to man. Those inclined to take the danger of black widow poisoning lightly would perhaps be sobered by the reports of some of the ex-

periments which have been conducted in this regard. One of the annual reports of the Smithsonian Institute stated that this spider's venom is about 15 times stronger than that of a rattlesnake! Some extensive experiments have demonstrated that it required only one-fifteenth as much black widow venom as snake venom to kill a certain number of rats of the same weight.

What about protection against the ill effects of black widow spider poisoning after one has been bitten? Is there an antivenin effective against this type of poisoning in the same way that other types of antivenin may save your life—or at least save suffering—after a rattlesnake bite?

Fortunately, the answer to these questions is "Yes." However, the fact that such an antivenin is available does not appear to be widely known. The black widow antivenin is specific treatment. The doctor may prescribe various other drugs for the relief of pain before the antivenin is used.

One black widow spider antivenin is a stable, dried horse serum preparation. The North Carolina doctor we mentioned earlier reported that several of his patients who received the antivenin were treated in the office, and no hospitalization or prolonged care was required. The antivenin is packaged dry, and the doctor dissolves it in a small amount of distilled water before it is administered.

Before black widow spider antivenin is given, the patient is tested for sensitivity to it. Next, one vial of the antivenin is administered intramuscularly. Usually, one injection is all that is necessary. If the patient shows a sensitivity to the serum, he could still receive the antivenin, after the doctor took steps to desensitize him properly.

There does not seem to be too much that can be done to banish the black widow, especially from the outdoor environment. One can, and should, of course, be on the lookout for this spider in wooded areas and in other places where she is likely to make her home. The generous use of common, ordinary moth balls is recommended to keep the black widow off shelves and out of chests and closets in the home.

Fortunately, the black widow spider does not rank among the major menaces to life and health in Alabama or in most other parts of the world. But because she may

bite you and give you several hours of extreme physical pain, she needs to be reckoned with. The black widow's poison can and has resulted in death, so take seriously the potential menace that she is.

Nonparalytic Polio Diagnosis Need Not Be Guesswork—"The diagnosis of nonparalytic poliomyelitis no longer has to be guesswork," a Yale University School of Medicine physician said in the July 2 Journal of the American Medical Association.

She said six months' experience with a relatively new method illustrates its value in diagnosing polio quickly and in winnowing out illnesses which otherwise might be diagnosed as nonparalytic polio.

The new method, a combination of virus-isolation and antibody-response tests, uses monkey kidney tissue instead of live monkeys for testing fluids from patients.

The "tissue culture" method, first introduced by Dr. John Enders, Boston, in 1949, is more rapid, less cumbersome, and less expensive than the use of live monkeys, the author said.

Diagnosis of nonparalytic polio previously depended much on symptoms and epidemic factor studies. Because of the similarity of these factors in several diseases, specific and rapid polio diagnostic tests have been needed. The "tissue culture" method, providing for virus isolation, lessens this confusion.

The "tissue culture" method was carried out on 96 patients at Grace-New Haven Community Hospital, New Haven, Conn., and was reported by Dr. Mary O. Godenne.

The results of antibody response tests were diagnostically significant in 96 per cent of the patients later proved by virus isolation to have polio, the author said.

She said the rapidity of the method "is an encouraging and a relatively new feature of diagnostic work.

"In 60 per cent of the patients from whom a poliomyelitis virus was obtained, the agent isolated from various sources was recognized and typed within seven days of the time of inoculation of the specimen. By two weeks after inoculation these positive results were available in 88 per cent."

Included in the report were patients with paralytic poliomyelitis, meningitis for which no cause could be found, nonparalytic polio, and encephalitis, an inflammation of the brain.

In 49 patients with paralytic poliomyelitis, a polio virus was isolated in 44 or 90 per cent.

Thirteen or 32 per cent of the 41 patients with meningitis and nonparalytic polio harbored a poliomyelitis virus, while three of the six patients with encephalitis had a polio virus.

In discussing the "tissue culture" method, Dr. Godenne said:

"It has demonstrated that the diagnosis of nonparalytic poliomyelitis no longer has to be guesswork. . . . Of the various tests now available, the isolation (and typing) of poliomyelitis viruses from specimens obtained from suspected cases is the most valuable."

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

June 1955

Examinations for diphtheria bacilli and Vincent's	91
Agglutination tests	801
Typhoid cultures (blood, feces and urine)	617
Brucella cultures	10
Examinations for malaria	98
Examinations for intestinal parasites	3,449
Serologic tests for syphilis (blood and spinal fluid)	24,875
Darkfield examinations	1
Examinations for gonococci	1,615
Examinations for tubercle bacilli	3,334
Examinations for Negri bodies	100
Water examinations	2,233
Milk and dairy products examinations	4,934
Miscellaneous	2,545
Total	44,703

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1955

	May	June	E. E.* June
Typhoid and paratyphoid fever	1	6	6
Undulant fever	1	3	2
Meningitis	8	11	9
Scarlet fever	27	35	22
Whooping cough	375	241	133
Diphtheria	6	1	9
Tetanus	4	3	4
Tuberculosis	200	188	221
Tularemia	1	0	1
Amebic dysentery	1	1	2
Malaria	1	0	16
Influenza	144	67	68
Smallpox	0	0	0
Measles	302	169	510
Poliomyelitis	8	25	24
Encephalitis	2	1	0
Chickenpox	247	71	75
Typhus fever	5	3	14
Mumps	316	191	121
Cancer	507	491	339
Pellagra	0	1	3
Pneumonia	202	168	130
Syphilis	142	167	627
Chancroid	1	3	15
Gonorrhea	359	363	451
Rabies—Human cases	0	0	0
Positive animal heads	18	25	0

As reported by physicians and including deaths not reported as cases.
*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR MARCH 1955, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During March			Rates* (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	6757	3955	2802	24.6	22.6	25.3
Deaths	2167	1372	795	7.9	8.5	8.5
Fetal deaths	132	51	81	19.2	22.4	23.6
Infant deaths—						
under one month	147	69	78	21.8	24.0	24.6
under one year	217	95	122	32.1	37.2	36.0
Cause of Death						
Tuberculosis, all forms, 001-019	26	12	14	9.4	14.3	16.3
Syphilis, 020-029	4	3	1	1.5	2.6	2.6
Dysentery, 045-048					0.4	1.1
Diphtheria, 055	1	1		0.4	0.4	0.4
Whooping cough, 056	1		1	0.4	0.4	
Meningococcal infections, 057	3	3		1.1	3.3	1.9
Poliomyelitis, 080, 081	1	1		0.4		
Measles, 085					0.4	
Malignant neoplasms 140-205	241	175	66	87.6	98.8	91.7
Diabetes mellitus, 260	22	22		8.0	10.7	9.3
Pellagra, 281	1	1		0.4	1.1	1.5
Vascular lesions, 330-334	266	156	110	96.7	123.4	112.9
Rheumatic fever, 400-402	2	1	1	0.7	1.8	2.6
Diseases of the heart, 410-443	742	515	227	269.6	261.2	252.1
Hypertension with heart disease, 440-443	136	63	73	49.4	58.8	68.7
Diseases of the arteries, 450-456	34	27	7	12.4	18.0	17.4
Influenza, 480-483	21	13	8	7.6	7.7	27.5
Pneumonia, 490-493	60	37	23	21.8	34.2	35.3
Bronchitis, 500-502	3	3		1.1	1.8	2.2
Appendicitis, 550-553	3	2	1	1.1	1.8	1.9
Intestinal obstruction and hernia, 560-561, 570	10	6	4	3.6	3.7	3.7
Gastro-enteritis and colitis (under 2), 571.0, 764	7		7	2.5	1.8	1.1
Cirrhosis of liver, 581	14	11	3	5.1	5.9	4.8
Diseases of pregnancy and childbirth, 640-689	9	4	5	13.1	19.0	22.9
Congenital malformations, 750-759	26	18	8	3.8	4.5	4.5
Accidents, total, 800-962	166	103	63	60.3	57.3	46.8
Motor vehicle accidents, 810-835, 960	61	46	15	22.2	21.7	19.7
All other defined causes	406	227	179	147.5	140.0	165.3
Ill-defined and unknown causes, 780-793, 795	98	31	67	35.6	41.9	40.5

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

**WIDER KNOWLEDGE OF CHEMICAL
HEALTH HAZARDS NEEDED**

The thousands of chemical products developed to make life simpler may only complicate it unless used with care and intelligence.

The Committee on Toxicology of the American Medical Association said recently that there are about a quarter of a million brand name chemical products which may be used in the home, farming, and industry.

All of them may be useful—but handled improperly they may become killers, cripples, and destroyers of property.

Understanding of the uses and the potential dangers of the wealth of products available is needed to prevent the estimated 3,300 accidental poison deaths which result each year from misuse of chemicals.

The array is so large and so many combinations of chemicals are possible that no complete catalogue of all available products has been made, the committee said.

As part of its campaign to spread information about these products and their hazards, the committee will sponsor a symposium on health hazards of chemicals Dec. 29 during the annual meeting of the American Association for the Advancement of Science, in Atlanta, Ga.

Bernard Conley, Ph. D., secretary of the A. M. A. Committee on Pesticides—which is co-sponsoring the discussion—will be moderator for the symposium. He said the purpose of the meeting is to interpret new knowledge of chemical products to scientists in various fields, so they may in turn use and spread the information.

The committees are working toward development of more intelligent use of chemicals so that their advantages may be enjoyed without dangerous results, Conley said. They do not mean to imply that potentially dangerous chemicals should not be used at all.

"The problem of health hazards has increased with the wider household use of chemicals once found only in industry," he said. "This makes misuse more serious and

the necessity for widespread knowledge more urgent.

"There are several thousand basic chemicals used in available products; these can be mixed in an infinite number of combinations and sold under an infinite variety of fanciful names. The products can be changed in composition without notice and even patent office records don't necessarily show the present composition. Thus, a listing of the contents of all brand-name products is impossible to make."

Conley said while no one may know all about all of these products, the danger of poisoning would be greatly reduced by wider understanding of the problem, reasonable care in using any chemical, and careful attention to label instructions.

On the AAAS meeting symposium devoted to the problem in the home, agriculture, and industry will be Lester M. Petrie, M. D., director, preventable diseases service of the Georgia Department of Public Health, Atlanta; Wayland J. Haynes, M. D., chief of the toxicology section of the Communicable Diseases Center, U. S. Public Health Service, Savannah; Irvin Kerlan, M. D., associate medical director of the federal Food and Drug Administration, Washington; and Mrs. Veronica Conley, assistant secretary of the A. M. A. Committee on Cosmetics, Chicago.

NEXT ANNUAL MEETING

BIRMINGHAM

APRIL 19, 20, 21, 1956

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EVALUATION OF RICHARDSON PREGNANCY TEST

HINTON W. WATERS, JR., M. D.
Montgomery, Alabama

Three men may be considered the originators of the Richardson pregnancy test. In 1949 G. C. Richardson¹ presented a new chemical pregnancy test but it was not published until 1951. R. L. Merkel² modified and compared the two procedures in 1950. G. W. Rapp³ devised the test tubes and has continued to try to popularize the test since Richardson's death.

The procedure is simple. Alkalinized urine is mixed with chloroform to free it of interfering substances and the acidified urinary extract, containing free estrone presumably, is allowed to conjugate with 2-4 dinitrophenylhydrazine which produces a permanent brown color when re-alkalinized. It is fast in that it can be performed in approximately twenty minutes and more widely since messy biological animals are eliminated. Its economy is amazing, costing one to three cents per test. The combined accuracy of the originators is reported in 3,419 pregnant women as 98.9%, and in 1,016 non-pregnant women as 98.3% correct. Furthermore, Richardson¹ states that approximately one half of his errors were in ectopic and complete abortions with no living chorionic tissue. If the originators' accuracy could be substantiated, the procedure would surely be a boon to the busy clinician. What a pity it is that other investigators have not been able to

attain such beautiful results. The combined accuracy of Roth,⁴ Halpern⁵ and Phebuch⁶ in 193 pregnant women was 95.3% correct, which is excellent and in line with the originators, but in 156 non-pregnant women the accuracy was only 52.5% (table I).

Rapp³ may be partially correct in that "a careful analysis of reports critical of the procedure has shown that they (a) attempt to use the technique under conditions for which the test was not designed and (b) fail to follow the simple but specific directions."

Halpern⁵ compared it with the two-hour rat test with 81% agreement. Phebuch⁶ was primarily investigating the sex test with 70 student nurses as controls, and 30% had taken aspirin or other drugs that are said to invalidate the test. Horwitt⁷ made no differentiation as to age, and errors are said to be high in the non-functioning female. Fischer⁸ changed the reagent volumes and normalities and used the electrophotometer for reading the end product. Roth⁴ did follow the described procedure with its controlling factors but unfortunately his results in the non-pregnant series were quite disappointing.

In view of the excellent originator results and the follow-up investigators' poor re-

Read before the Alabama Association of Obstetricians and Gynecologists in Birmingham on October 19, 1954.

1. Richardson, G. C.: Am. J. Obst. and Gynec. 61: 1317, 1951.
2. Merkel, R. L.: Am. J. Obst. and Gynec. 60: 827, 1950.
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4. Roth, L. G., and Leonard, W. G.: U. S. Armed Forces M. J. V: 83, 1954.

5. Halpern, E. P.; Gross, M. L., and Brody, H.: Proc. Soc. Exper. Biol. and Med. 80: 182, 1952.

6. Phebuch, B., and Minckler, J.: West. J. Surg. VIII: 61, 1953.

7. Horwitt, B. N., and Segaloff, A.: J. A. M. A. 151: 406, 1953.

8. Fischer, R. H., and McColgan, S. P.: Am. J. Obst. and Gynec. 65: 628, 1953.

sults when changes of procedure were made on a paucity of cases, a study was undertaken following the exact procedure and controlling outside factors as advised by Richardson¹ and further emphasized by Rapp.³ The extracting tubes were bought from La Motte Chemical Company. Posi-

taneously with and without the chloroform extractive process. There was perfect agreement in 22, a one plus difference in

TABLE I

		Pregnant					
Investigator		Total Cases	Correct No.	Correct %	Incorrect No.	Incorrect %	
Richardson	1	2560	2537	99.1	23	0.9	
Rapp	3	659	657	99.7	2	0.3	
Merkel	2	200	188	94.0	12	6.0	
Roth	4	122	118	96.7	4	3.3	
Halpern	5	71	66	92.9	5	7.1	
Total		3612	3566	98.7	46	1.3	
		Non-Pregnant					
Richardson	1	500	500	100.0	0	0.0	
Rapp	3	316	313	99.0	3	1.0	
Merkel	2	200	186	93.0	14	7.0	
Roth	4	78	44	56.4	34	43.6	
Halpern	5	29	15	51.7	14	48.3	
Phebuch	6	49	23	46.9	26	53.1	
Total		1172	1081	92.2	91	7.8	
		Not Classified As To Pregnant State					
Horwitt	7	163	67	41.0	96	59.0	
Fischer	8	302	142	47.0	160	53.0	
Total		465	209	44.9	256	55.1	
Total of pregnant and non-pregnant		5249	4856	92.5	393	7.5	

TABLE II

Pregnant			
	Total Cases	Correct	Incorrect
28-76 days			
amenorrhea	16	14	2
3 months pregnant	2	1	1
4 months pregnant	5	2	3
5 months pregnant	8	8	0
6 months pregnant	6	6	0
7 months pregnant	7	5	2
8 months pregnant	4	4	0
9 months pregnant	8	7	1
	—	—	—
Total	56	47 (84%)	9 (16%)
Non-pregnant			
0-7 days			
amenorrhea	5	5	
8-14 days			
amenorrhea	14	10	4
15-21 days			
amenorrhea	15	9	6
22-28 days			
amenorrhea	14	6	8
28-140 days			
amenorrhea	8	4	4
6 weeks check-up	10	4	6
	—	—	—
Total	66	38 (57.6%)	28 (42.4%)

tive and negative controls were run with each test. The results were most disappointing and especially in the non-pregnant group (table II). They compare more nearly with the follow-up investigator group. An apology is made for presenting such a small series but the results in the non-pregnant are so poor, and substantiated by others, that it would be useless to carry on such a poor procedure for the diagnosis of pregnancy.

However, a test that is positive in 90 odd per cent of pregnant women and approximately 50% of non-pregnant women is intriguing and is worthy of a bit of discussion. Richardson stated that approximately 50% error was found in the non-pregnant before he used his chloroform extractive process, which is the same as other investigators have found after using the process. Therefore, thirty urine specimens from pregnant and non-pregnant women were run simul-

4, and a two plus and three plus difference in 2 cases, respectively. Of the six non-pregnant urines three were positive by both methods. Thus, it would appear that the extractive process either is of no value or inadequately described or inexpertly performed. In answer to the latter, the method of mixture, shaking or inverting, gently or vigorously, failed to change the result.

It was postulated that the substance being tested is "free estrone" but an aqueous suspension of estrone failed to give a positive result either with or without chloroform extraction. The opinion of the manufacturer⁹ is a "positive reaction would certainly ensue." Stimmel¹⁰ calculates that the test is not possibly one for free estrone, and any free estrone present should be in the chloroform which is discarded. However, he does not offer any suggestion as to what the substance might be and admits no experience with the test. Fischer⁵ suggests

9. Personal communication with Carroll Dunham Smith Pharmacal Company.

10. Stimmel, B. F.: *Am. J. Obst. and Gynec.* 65: 635, 1953.

that estrone and pyruvic acid curves are quite similar. Two good laboratory texts describe a pyruvic acid test which resembles a refinement of the Richardson¹ test. A synopsis from Kolmer¹¹ is thus: In the "method by Friedman and Hangen (J. Biol. Chem. 147: 415, 1943) the pyruvic acid is extracted with ethyl acetate and the red color produced by the action of 2-4 dinitrophenylhydrazine on this extract, in alkaline solution, is measured." A normal blood value is one mg. per cent and a normal urinary value is 2 mg. per cent. In thiamine chloride deficiency, the blood value is increased to 3 mg. per cent. Another laboratory text, Hepler,¹² lists the value as increased in food ingestion, thiamin deficiency, exercise, fever, carcinoma, cirrhosis of the liver, Von Gierke's disease, hyperthyroidism, cardiac decompensation, and shock.

The first morning urine specimen should eliminate food ingestion and exercise. The other conditions were presumed to be absent by the patient's history, except thiamin deficiency. Therefore, a clinical course of 100 mg. of thiamine chloride per day for two days was given seven pregnant and two non-pregnant positive reactors and the effect observed by means of the positiveness of the Richardson test. All had a decrease in positiveness as illustrated in table

TABLE III
Effect of 100 Mg. of Thiamin Chloride
For Two Days

Patient		24 Hrs.	48 Hrs.	72 Hrs.
W. S. D.	4 plus	1 plus	0	—
L. H. A.	4 plus	2 plus	4 plus	(in labor 8 hrs.)
K. M.	4 plus	Tr	Tr	—
J. R. W.	4 plus	1 plus	—	2 plus
H. E. H.	4 plus	2 plus	—	1 plus
B.	2 plus	0	—	2 plus
B. R. L.	2 plus	0	0	—
C.	2 plus	0	—	1 plus
W.	1 plus	0	0	—

III. This number is too small to be of any significance but should be further investigated, for a rough, simple, office thiamin deficiency test would be of greater value than a worthless pregnancy test.

11. Kolmer, Spaulding, and Robinson: *Approved Laboratory Technic*, Appleton Century Crafts, ed. 5, 1951.
12. Hepler, O. E.: *Manual of Clinical Laboratory Methods*, Chas. C. Thomas, Publisher, ed. 4, 1952.

SUMMARY

Results with the Richardson pregnancy test are compared with those of others and the originators. Evidence is given that the chloroform extraction is either valueless or inadequately described. A new substance being tested is suggested after a smattering of clinical investigation.

730 Adams Avenue.

Editor Issues Challenge to Restaurateurs—The editor of *Today's Health*, published by the American Medical Association, has issued a challenge to restaurant owners to remember "the forgotten man."

Dr. W. W. Bauer's forgotten men are not those who are ignored by the waiter but those who eat many meals away from home but must stick to carefully selected diets with restrictions on salt, meat, sweets, fats, or starchy foods.

"Not only is the plight of the restaurants' forgotten people a matter of grave concern to them and their health, it is also a factor in successful restaurant management," Dr. Bauer said.

He said the restaurateur can satisfy the growing number of diet-restricted customers and still make a good profit. In many cases a "mere change in menu" will help these people.

He suggested the addition of fresh or sugarless canned fruit and skim milk to the menu for diabetics and those watching their weight. A note might be added to the menu saying that artificial sweeteners and nonsodium "salt" will be supplied on request.

Persons with gout must avoid meats; therefore, fish, poultry, eggs, cheeses, and pancakes or waffles "make them happy," Dr. Bauer said.

Customers who must watch their salt intake have a harder time than almost any other group and will give more trouble, Dr. Bauer said. "With the progressive aging of the population, and the increase in heart and kidney diseases, it is a sound business prediction that these customers will grow more numerous."

The low-salt diet requires extra stocks of low-salt bread and unsalted butter or margarine. It means special cooking without salt or with a salt substitute. "It means extra expense, and this must be reflected in menu prices. But it can also mean an expanding clientele of persons willing and able—no, more, happy—to pay the differential in price . . .," he said.

Dr. Bauer suggested a special dietary department in a restaurant rather than a special restaurant, because most persons want a restaurant convenient to where they happen to be at the time. "A special restaurant, known as such, limits its clientele. The normal diner avoids it; even the one who needs its special attentions may be reluctant to let the world know that he has to eat in a restaurant catering to the abnormal," he said.

COMMON LOWER URINARY TRACT OBSTRUCTIONS IN THE MALE PATIENT

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The purpose of this paper is to review some of the common lower urinary tract obstructions in the male patient and to offer a few practical helpful hints for management, especially applicable for general office practice. By lower urinary tract I mean the passage from the vesical neck throughout the entire urethral channel. Obstructions occur in all age groups. However, for clarity I shall consider the subject in three age groups, namely, 1. childhood obstructions, 2. obstructions in the young adult, and 3. obstructions in the older adult.

CHILDHOOD OBSTRUCTIONS

Obstructions in childhood are usually on a congenital basis and I shall not go into the theories of origin. The obstruction is generally at the vesical neck, the posterior urethra, the external urethral meatus, or at the distal prepuce.

Phimosis: Phimosis may cause symptoms of obstruction in the young male. During micturition there is a ballooning of the prepuce in most instances and a small urinary stream is usually seen coming through a tiny opening at the distal prepuce. This condition is alleviated by a circumcision or a dorsal slit. The external urethral meatus should always be examined to see whether or not it is adequately patent.

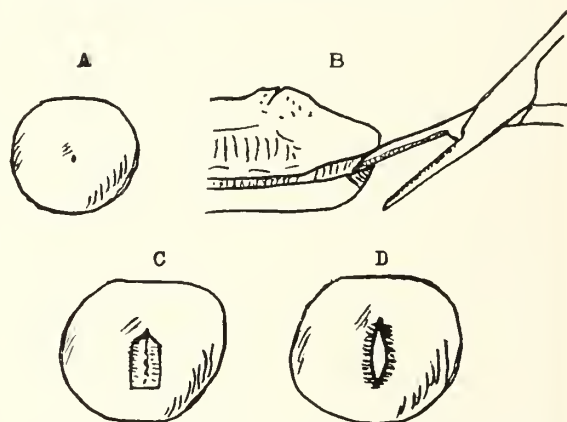
Imperforate Urethral Meatus: This is a rare condition and is most often brought to the physician's attention when the infant fails to wet his diaper after birth. On physical examination, the bladder will be distended and there is usually a dimple in the glans penis which is covered by a thin membrane. This membrane can be easily punctured by a filiform bougie or a ureteral catheter and the condition is alleviated. The catheter should be passed into the bladder to rule out obstruction elsewhere. If spontaneous voiding does not occur after catheterization, then specialized investigation should be done to rule out congenital valves in the posterior urethra or a congenital contracture of the vesical neck.

Small External Urethral Meatus: This is

one of the most common causes of urinary difficulty in the young male. The meatus may become secondarily infected, and the condition is brought to the physician's attention because of urinary frequency, dys-

TECHNIQUE

EXTERNAL URETHRAL MEATOTOMY



uria, and straining. The diagnosis is easily made by simply examining the external urethral meatus. The treatment should be directed toward enlarging the strictured site, either by passage of dilating catheters or bougies, or by external urethral meatotomy.

The technique of meatotomy is simple and can be carried out easily in the office, usually requiring no anesthesia. A small probe is passed through the pin point meatus to establish the proper site. One jaw of a small hemostat is then inserted into the fossa navicularis, and with the point of the hemostat directed posteriorly, the hemostat is closed tightly and held in position for approximately five minutes. After removing the hemostat, the compressed tissue can be divided with scissors and hemostasis is maintained. Should bleeding occur, sutures in each side of the new meatus may be required for control. Instructions are given to the parents to keep the meatus clean and to separate it each day until healed, to prevent recurrence.

Follow-up is important in treating childhood obstructions, and if there is any difficulty in voiding, periodic urethral dilations are usually in order.

OBSTRUCTIONS IN THE YOUNG ADULT

A vast majority of the lower urinary tract obstructions in the young adult are caused by urethral strictures and they are usually of the acquired type. Of these, about 90% are inflammatory and the remainder traumatic.

Inflammatory Strictures: By far the most common cause of urethral strictures is gonorrheal urethritis. With the advent of present day chemotherapeutic agents and antibiotics, we do not see as many strictures as the physician of several decades ago saw. Pyogenic infections, tuberculosis, and syphilis may cause urethral strictures but they are rare. The stricture may occur in any portion of the urethral canal and may be single or multiple. The most common sites, however, are in the bulbous and bulbo-membranous portions. The symptoms are usually diminution in the size and force of the urinary stream, urethral discharge, and shreds in the voided urine. The diagnosis can be made by history and by meeting the obstruction while attempting to calibrate the urethra.

The treatment should be directed toward gradual urethral dilatations until a caliber of about 24 F. is obtained. This may require several office dilatations if the opening is very small. It is not good practice to dilate from a filiform-sized stricture to a normal caliber at the first attempt because of the danger of bleeding and trauma. When a stricture is encountered for the first time it is suggested that the penis be thoroughly cleansed, and the distal channel be thoroughly lubricated by retrograde injection of a lubricating jelly, such as Lubafax. Attempts are then made to pass a filiform bougie through the stricture into the bladder. If difficulty is met, it is helpful to pass several filiforms to the stricture, some of which should have pig-tail ends. If one has patience and a little luck, one of the filiforms usually passes through into the bladder and the remainder can be removed. The dilating followers, either sounds, or woven silk bougies or catheters, are then attached to the filiform guide and gentle dilatation can be accomplished. It should be emphasized to all patients suffering from a post-inflammatory urethral stricture that they will require periodic urethral dilatations for an indefinite period. The intervals will vary, of course, with the individual patient.

Traumatic Strictures: Traumatic strictures are caused by external or internal trauma to the urethra. External injury may be caused by straddle injuries, fractures of the pelvis, bullet wounds, etc., resulting in rupture or laceration of the urethra. These injuries usually involve the bulbous and posterior portions. Internal trauma may result from unwise medication with caustics and strong antiseptics, which cause injury to urethral mucosa with resulting fibrosis and stricture. Strictures may also develop from injury during prolonged transurethral resection, other types of prostatic surgery, or unskilful instrumentation.

These strictures require periodic urethral dilatations and are usually more difficult to keep dilated than the inflammatory ones. Some post-traumatic strictures may require surgical treatment.

Median Bar and Bladder Neck Obstructions: This condition, which may manifest itself in the young male patient and go unrecognized for a long time, may have been treated as chronic prostatitis, chronic urethritis, or chronic cystitis. The diagnosis is made by a complete urological survey, including cystoscopy and panendoscopy. Peyton¹ summarized twenty-six cases of median bar and bladder neck contractures in young men from eighteen to thirty-four years of age. Surgery is often necessary to relieve this type of obstruction, preferably through the transurethral route.

OBSTRUCTIONS IN THE OLDER ADULT

It is obvious that the obstructions previously mentioned may involve patients in this category. However, as we pass into the fifth decade of life and on, we most commonly see enlargement of the prostate gland as the primary cause of lower urinary tract obstruction. The enlargement may be benign or malignant.

Carcinoma of the Prostate Gland: Emphasis should be placed here upon the value of a routine yearly rectal examination of the prostate gland in all males over the age of forty, in order that any suspicious nodules in the prostate may be detected early enough for definitive surgical removal of the entire prostate and seminal vesicles should the biopsy report show the lesion to be carcinomatous. Only about

1. Peyton, Alton B.; Bladder Neck Obstructions in the Young Male Adult, J. Urol. 69: 109-117, 1953.

5% of prostatic cancers, however, are diagnosed early enough for radical surgery to be advised. It is not in the scope of this paper to go into detail about the treatment of prostatic cancer.

Benign Hypertrophy of the Prostate Gland: A majority of the lower urinary tract obstructions in later life are due to a benign enlargement of the prostate gland. The earliest symptom may be nocturia, followed by gradual diminution in the size and force of the urinary stream. Dysuria, burning, and tenesmus usually indicate an infected urine. The diagnosis is suggested by the history and can usually be confirmed by rectal palpation of the prostate. One generally finds a smooth, symmetrical enlargement. The rectal examination may be confusing, however, if there is mainly a middle lobe hypertrophy. When obstruction is suspected, I would recommend an aseptic catheterization with a small coude

tipped catheter, immediately after voiding, to test the amount of residual urine in the bladder. If the symptoms warrant and the patient is unable to empty his bladder properly, prostatectomy should be advised, if his general physical condition is adequate enough for him to be considered a reasonable operative risk. Many patients with mild to moderate symptoms of benign prostatic hypertrophy may get some relief from periodic prostatic massages and antibiotics, should there be evidence of infection.

SUMMARY

A review of some of the common causes of lower urinary tract obstructions in the male patient is presented, with reference to those in children, young and old adults. Emphasis is placed upon symptoms and diagnosis. Suggestions are made for the proper management of these conditions, particularly applicable to a general office practice.

354 St. Francis Street.

TREATMENT OF HYPERTENSION WITH DRUG COMBINATIONS

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This report will summarize the experiences and results noted in 107 cases of hypertension treated with combined drug therapy. A few of these patients were reported in a previous study,¹ and are included here to show a longer follow-up, as well as some recent changes in the mode of treatment. All patients have been seen at intervals of one to four weeks and have been followed over periods ranging from two to 24 months. Drugs used have been oral preparations of four types: 1. *Rauwolfia*

serpentina, including both the crude extract[°] and the reserpine fraction,[†] 2. hydralazine,[‡] 3. veratrum in a new purified form, cryptenamine,^{**} and 4. the two ganglionic blocking agents, hexamethonium^{***} and pentapyrollidinium^{****} (pentolinium).

All the cases to be reported have been treated with a combination of at least two of these drugs; and nearly always incorporating *Rauwolfia* with one, two, or three other agents. Patients treated with *Rauwolfia* alone comprise a fairly large and interesting group, and will be reported sep-

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This study was supported by grants from Irwin, Neisler and Co., Decatur, Illinois; Ciba Pharmaceutical Products, Inc., Summit, New Jersey; and Burroughs Wellcome and Co., Inc., Tuckahoe, New York.

1. Galen, W. P., and Johnson, L. L.: Out-patient Treatment of Hypertension with Hexamethonium and Apresoline, J. M. A. Alabama 23: 64, 1953.

* Raudixin,^R Squibb, New York.

† Serpasil,^R Ciba Pharmaceutical Products, Inc., Summit, New Jersey.

‡ Apresoline,^R Ciba Pharmaceutical Products, Inc., Summit, New Jersey.

** Unitensin,^R Irwin, Neisler Company, Decatur, Illinois.

*** Hexameton,^R Burroughs Wellcome and Co., Inc., Tuckahoe, New York.

**** Ansolysen,^R Wyeth Laboratories, Philadelphia, Pennsylvania.

arately.² The universal safety and lack of serious side effects make it the drug of choice for beginning the treatment of virtually all cases not responding to mild sedation. The only exception to this is the hospitalized hypertensive emergency where the powerful ganglionic blocking agents may be started immediately. There is good evidence, also, that patients "primed" with *Rauwolfia* require smaller doses of more powerful drugs for satisfactory control.

A word about the organization and selection of patients in the Hypertensive Clinic should be entered here before proceeding with our findings. Patients were referred following hospitalization or from the regular medical clinic and were accepted for treatment only after adequate diagnostic studies were in progress or completed. These consisted of a general history and physical examination including eye-grounds; laboratory studies consisting of hemoglobin, WBC, differential, Kahn, urinalysis, chest x-ray, Fishberg concentration test, NPN or BUN, PSP, IVP and an electrocardiogram. In selected cases a Regitine^R test was performed to rule out the presence of a pheochromocytoma. An attempt was made to obtain at least three baseline blood pressures during a month on phenobarbital alone while the various initial studies were being carried out. Patients found to have severe chronic renal disease, as well as those responding to phenobarbital, were not accepted for treatment and were excluded from the study. As a general rule, patients with a blood pressure less than 180/100 were not accepted for treatment unless they were in the very young age group. This rule was made because of a limited amount of space, drugs and personnel, and not because we thought that such cases would not benefit from treatment.

Results of therapy have been evaluated chiefly by blood pressure recordings taken in the sitting position, and usually between the hours of 9:00 a. m. and 12:00 noon on clinic days. Some criticism has been directed at using office blood pressures to evaluate a therapeutic regimen for hyper-

tension.³ Practically speaking, however, office blood pressures will be the criteria used by the vast majority of physicians employing antihypertensive drugs.

One author⁴ advises against self-taken home blood pressure recordings because of the anxiety produced and the tendency to change the medications because of slight deviations in pressures. Also, the problem of syncope from overdosage, usually noted only when the blocking agents are used, can often be avoided by having the patient stand for five minutes before taking each dose, and reducing the drug by one-half if definite dizziness is produced. Daily bowel movements, even at the expense of a routine laxative, are essential when taking the ganglionic blocking agents. In a few selected patients, home blood pressure charts have been secured to evaluate the hypotensive response. Periodic reviews of fundi, renal function, cardiac size, and electrocardiogram, as well as whether there are subjective feelings of improvement, are certainly more important than simple blood pressure recordings. Nevertheless, these findings usually correlate well with the blood pressure response, particularly if several different pressures are averaged over a period of weeks.

A detailed regimen for administering combined antihypertensive drugs falls beyond the scope of this report. A recent monograph⁵ and several seminars⁶ cover the subject and should be studied carefully before undertaking the use of combinations with potent hypotensive properties. The physician should also be familiar with the clinical pharmacology of these agents in order to interpret their side effects and relative contraindications, as well as the therapeutic responses which will be encountered.

In this clinic we have followed the general rule of using the least potent and safest agent first, namely, *Rauwolfia*, and increas-

3. Freis, Edward D., and Finnerty, Frank A.: Recent Developments in the Treatment of Severe Hypertension, G. P., March, 1953.

4. Wilkins, Robert W.: Seminar on Antihypertensive Drugs, American Journal of Medicine, Vol. XVII, p. 703.

5. Schroeder, Henry A.: Hypertensive Diseases, Causes and Control, Lea & Febiger, 1953.

6. Seminars on Antihypertensive Drugs: American Journal of Medicine, August, September, October, November, December 1954.

* Made available through courtesy of Ciba Pharmaceutical Products, Inc., Summit, New Jersey.

2. Cotten, H. B., and Herren, W. S.: To be published.

ing the dose stepwise up to a reasonable limit* unless either a satisfactory response or intolerance develops.

When this limit has been reached without either of the latter conditions supervening, the next most potent agent is added to the regimen; and likewise it, if possible, is increased to a reasonable limit,** or until a satisfactory response has appeared. There is a choice between hydralazine and veratrum at this second level of attack, and, to make this choice, it is essential that the physician be familiar with the properties of each drug.⁶ For instance, we would be less likely to choose hydralazine in the presence of tachycardia, coronary insufficiency, peptic ulcer, collagen disease, or severe uremia. On the other hand, we would be less likely to use veratrum in the presence of severe or malignant hypertension, where the further need for blocking agents is anticipated. It has been shown that hydralazine acts synergistically with hexamethonium⁵ and both mutually cancel out many of the undesirable effects of the other, particularly in respect to the development of tolerance. Whether or not this complimentary effect holds true for combining hydralazine and pentolinium has not been as well studied; in fact, some possible antagonism has been reported.⁷ Such antagonism has not been noted in our experience, however, except possibly on one or two occasions.

When the maximum dose^{***} of hydralazine and veratrum (either or both in combination with *Rauwolfia*) has been achieved without a satisfactory result, the third and most powerful level of attack must be considered, that of adding the ganglionic blocking agents. At the present time, only two of these agents are of sufficient value to be recommended for general clinical use. They are hexamethonium and pentolinium. Again, the same principles apply of stepwise increases in the dose and a thorough knowledge on the part of the physician of the properties of these drugs.^{3,4,5,6} There are some differences between the two

ganglionic blocking agents, in that pentolinium usually requires a somewhat smaller dosage schedule at less frequent intervals. There is little difference, however, in the effects (both desirable and undesirable) produced by the two drugs and in some cases the duration of response using hexamethonium exceeds that of pentolinium.⁸ We feel that, when a poor result occurs with one blocking agent, a trial with the other is indicated before discarding their use.

Charts Nos. 1, 2 and 3 tabulate the individual cases with a notation as to whether the response to treatment was "satisfactory" or "unsatisfactory." We considered as a "satisfactory" result those patients in whom the response was good enough to warrant further treatment. Conversely, subjects in whom drug therapy was considered not to have been of sufficient value to continue were classified as "unsatisfactory." Included in this latter group are patients who consistently seemed to be unable to cooperate, as well as those considered to be poor results due to complicating organic disorders, such as developing angina pectoris or progressive uremia. Chart No. 4 summarizes the overall results without excluding these patients. This is to show what might be expected in such a clinic series before eliminating many subjects with poor responses possibly unrelated to antihypertensive therapy.

It will be seen from analyzing the first three charts that many responses which have been rated as satisfactory have still not achieved a normal blood pressure. In such instances, it may have been that there was such an improvement over a previous extremely high level that the resulting fall was considered worth while. Striking relief of symptoms or improved objective findings may have been a factor in arriving at this decision. Insofar as is possible, these factors are noted under "remarks" in charts Nos. 1, 2 and 3.

Occasionally, the average blood pressures rose when a stronger drug was added to the regimen. Most often, this was due to normal variation or poorer cooperation as treat-

* (1.0 mg. reserpine or 800-900 mg. crude root daily.)

** Hydralazine (Apresoline^R) — maximum dose 400-600 mg. daily. Veratrum (cryptenamine, Unitensin^R)—maximum dose tolerated without nausea and vomiting.

7. Personal Communication: Wyeth Laboratories.

8. Birkhead, N. C., and Allen, E. V.: Comparison of Effects of Hexamethonium and Pentyrollidinium Injected Subcutaneously, Proceedings of Staff Meetings of Mayo Clinic, September 1, 1954.

CHART 1

AVERAGE BLOOD PRESSURE ON
EFFECTIVE OR MAXIMUM
TOLERATED DOSES OF:

NAME	AGE	Phenobarb.	Rauwolfia	Rauwolfia & Apresoline	REMARKS	RESULTS
L.B.	21 CF	222 155	139 100	149 112	Pyelitis & eclampsia	Satisfactory
P.B.	67 CF	242 123	255 118	249 109	Refused to continue Rx.	Unsatisfactory
E.B.	47 CM	204 132	220 140	200 135	Prior: gastrectomy (ulcer)	Unsatisfactory
A.C.	51 CF	209 121	200 111	171 106	BUN fell from 60 to 34 on Rx.	Satisfactory
W.E.C.	66 CM	220 128	180 110	190 101	Uremia and peptic ulcer	Satisfactory
F.C.	53 CM	206 148	195 120	170 90	BUN fell from 60 to 31 on Rx.	Satisfactory
K.C.	53 WF	216 134	170 107	130 90	Obesity	Satisfactory
L.dF.	75 WF	183 110	169 74	160 83	Refused to continue Rx.	Satisfactory
J.L.D.	45 CF	181 122	140 99	125 86	Now maintained Rauwolfia alone	Satisfactory
C.E.	60 CF	185 102	154 99	155 91	Now maintained Rauwolfia alone	Satisfactory
U.G.	41 CM	189 118		158 98	Rx. in hospital only	Satisfactory
M.G.	59 CF	220 122	206 123	210 113	Died (CVA) after 4 mos. Rx.	Unsatisfactory
L.M.G.	45 CF	228 128	195 115	160 100	Previous (1 yr. ago) Hex. Rx.	Satisfactory
J.N.G.	61 WM	209 117	200 113	190 98	Non-funct. right kidney	Satisfactory
E.G.	54 CF	212 132	187 106	165 93	Only 25 mg. Apresoline q.i.d.	Satisfactory
L.G.	32 CF	220 140	178 113	157 101	Preeclampsia—Rx. in hospital	Satisfactory
E.H.	26 CF	205 103	142 84	162 91	Preeclampsia—Rx. in hospital	Satisfactory
S.H.	63 WF	213 112	210 97	167 81	Also Butazolidin for arthritis	Satisfactory
A.H.	69 CF	169 116	154 105	160 109	Angina from Apresoline	Unsatisfactory
J.H.J.	59 CM	282 152	218 115	140 94	Rx. in hospital only	Satisfactory
M.J.	70 CF	250 130	235 109	183 95	Arterial insuff. right leg	Satisfactory
U.K.	59 WM	223 116	236 124	230 120	Rx. in hospital—BUN 121	Unsatisfactory
I.K.	55 CF	202 106	208 104	185 95	Only 25 mg. Apresoline q.i.d.	Satisfactory
G.L.	48 CF	190 118	151 112	134 96	Previous Rx. Hex. 1953	Satisfactory
F.McF.	43 CF	186 127	140 95	151 102	Now maintained Rauwolfia alone	Satisfactory
A.McQ.	47 CM	212 116		149 97	Rx. in hospital only	Satisfactory
M.M.	57 WF	218 114	217 106	214 88	Intolerant to Apresoline	Unsatisfactory
L.M.	74 CF	241 114	202 103	205 79	Feels better on Apresoline	Satisfactory
E.M.	41 CM	184 133	174 111	156 106	Labile blood pressure	Satisfactory
E.P.	49 CF	223 147	185 118	200 116	Marked obesity	Satisfactory
S.R.	54 CM	180 125		170 110	Labile blood pressure unchanged	Unsatisfactory
G.S.	59 CF	213 129	200 110	149 91	Obesity and old CVA	Satisfactory
R.M.S.	45 CF	176 117	160 100	160 100	Maximum dose not reached	Unsatisfactory
W.M.S.	46 CF	193 111	230 112	168 89	Rx. disc. too ill for clinic	Satisfactory
A.T.	39 CF	184 95	180 105	200 100	Fatal pul. emb. after 2 mos. Rx.	Unsatisfactory
A.W.	36 CF	204 144	178 127	176 125	Apres. not yet maximum dose	Satisfactory
A.W.	53 CF	225 111	195 99	140 90	Apres. not yet maximum dose	Satisfactory
E.W.	43 WF	230 134	240 140	190 115	Apres. not yet maximum dose	Satisfactory
J.W.	52 CF	237 135	192 110	190 104	Prior response to Hex.	Satisfactory
M.Y.	55 CF	272 150	225 130	260 150	Failed to return for maximum Rx.	Unsatisfactory

CHART 2

AVERAGE BLOOD PRESSURE ON EF-
FECTIVE OR MAXIMUM TOLERATED
DOSES OF:

NAME	AGE	Phenobarb.	Rauwolf.	Rau. & Verat. & Apresoline	REMARKS	RESPONSE
A.D.	63 CF	197 112	160 88	139 87	Now maintained Rauwolfia alone	Satisfactory
J.D.	80 CM	240 113	194 72	204 90	Verat. ineffective	Satisfactory
C.D.	75 WM	223 116	196 104	187 108	Verat. ineffective	Satisfactory
O.E.	48 WF	207 120	223 114	227 124	Expired, lupus and CVA	Unsatisfactory*
J.H.	54 CM	191 136	188 126	186 125	Intolerance to Apresoline	Unsatisfactory
L.H.	46 CF	217 130	185 113	163 108	Mild nausea on veratrum	Satisfactory
W.H.	51 CM	190 119	176 106	170 110	Apresoline dose 300 mg. daily	Satisfactory
L.J.	49 CF	260 140	240 121	260 129	Apresoline produced angina	Unsatisfactory*
H.K.	48 CF	217 135		210 120	Uncooperative	Unsatisfactory
M.K.	77 CF	196 100		170 80	Stopped Rx., "weakness"	Satisfactory
S.McK.	53 CF	234 128	214 125	170 98	Veratrum dose 12 mg. (cryptenamine)	Satisfactory*
E.M.	61 WF	231 134		201 113	Expired. CVA	Satisfactory
R.N.	59 CF	234 128	270 115	240 120	Intolerance both drugs	Unsatisfactory*
S.R.	49 CM	233 148		224 120	Epilepsy. Rx. Dilantin	Unsatisfactory*
J.E.S.	58 WM	193 106	178 104	166 102	Prefers Rauwolfia alone	Satisfactory
L.S.	52 CF	190 121	184 116	170 115	Uncooperative	Unsatisfactory
M.S.	65 CF	252 115		230 96	Diastolic fall only	Satisfactory
M.T.	75 WF	224 124	210 104	220 110	Intolerance veratrum	Unsatisfactory
E.U.	53 CF	170 120	170 110	136 102	Chronic mild nausea	Satisfactory
G.W.	56 CF	240 140		149 85	Now maintained Rauwolfia alone	Satisfactory
I.W.	51 CF	221 105		190 87	Now maintained Rauwolfia alone	Satisfactory
A.B.W.	39 CF	174 115	155 115	172 93	Diastolic fall only	Satisfactory
L.W.	47 CF	181 113	180 110	160 108	Previous response Hex.—Apresoline	Satisfactory*
L.E.W.	43 CF	240 148	154 108	160 100	Veratrum ineffective	Satisfactory
J.L.W.	39 CM	180 143	192 130	173 125	Stopped before max. dose	Unsatisfactory
C.W.	54 CM	206 132	200 130	183 115	Veratrum ineffective	Satisfactory

* Also treated with ganglionic blocking agent. See Chart 3.

ment became more complicated, although developing tolerance or progressive disease may have played a part in some cases.

Of extreme interest to us, as well as other investigators,⁶ have been a few instances in which we were able gradually to omit

all medications except small doses of *Rauwolfia* or *Rauwolfia*-Apresoline^R and maintain the therapeutic result. This was true even though large doses of the most powerful drugs may have been required previously. Usually these were patients who had been well controlled for a year or more.

CHART 3

AVERAGE BP ON EFFECTIVE OR MAX.
TOLERATED DOSES OF:

NAME	AGE	Pheno- barb.	Rau- wolfia	Rau. & Apres.	Rau. & G. B. Agt.	Rau. & Apres. & G. B. Agt.	REMARKS	RESPONSE
W.B.A.	64 CF	218 113	218 120	235 116		177 98 (H)*	Rx. stopped due to rising BUN	Unsat.
E.A.	44 CF	243 135	233 126		165 101 (H)*		Failed to return after 5 mos. Rx.	Sat.
A.B.	42 CF	161 121	152 110			150/114 (H)*	Obesity	Unsat.
S.B.	55 CF	245 117				229 104 (H)*	Recurrent purulent meningitis	Unsat.
						233 108 (P)*	BUN 25 to 13 on Rx.	
R.B.	49 CM	176 120	134 98		137 99 (P)*		BUN fell from 80 to 52 on Rx.	Sat.
S.A.D.	38 CF	260 170			230 130 (P)*	215 124 (P)*	BUN fell from 90 to 49 on Rx.	Sat.
G.E.	51 CF	241/153	240 170		234 138 (P)*	220 134 (P)*	Persistent vomiting while on Rx.	Unsat.
O.E.	48 WF	207 120	223 114		200 110 (P)*		Expired, Dx: Diss. lupus	Unsat.
S.E.	50 CF	223 119				181 95 (H)*	On Rx. since 1952	Sat.
E.E.	36 CF	200 113		200 130	180 115 (P)*	160 110 (P)*	Only 6 weeks Rx. Early malignant phase.	Sat.
M.H.	43 WF	248 145			124 86 (H)*	138 79 (H)*	Tolerance developing. Dx: periarteritis nodosa.	Sat.
T.J.H.	46 CM	280 180			210 140 (P)*	190 120 (H)*	Uremia gradually increasing but	
						202 134 (P)*	subjectively better.	Sat.
E.H.	53 CM	207 120				166 102 (H)*	Rx. finally discontinued due to sexual impotence.	Sat.
L.J.	64 CF	206 110		235 110		166 87 (H)*	BUN fell from 99 to 23 in 2 yrs. Rx.	Sat.
A.L.J.	53 CF	270 136	207 111	235 110		170 92 (H)*	Later relapsed when Rx. discontinued	Sat.
J.B.J.	28 CM	190 126	159 106	151 100		155 94 (P)*	Now maintained Rauwolfia-Apresoline alone.	Sat.
L.J.	49 CF	260 140	240 121	228 112		193 100 (H)*	Developed angina on Apresoline	Sat.
F.K.	65 CM	213 134	170 104			138 84 (H)*	Had coronary after 2 yrs. of satisfactory Rx.	Sat.
L.K.	53 CF	230 130	240 130		230 120 (P)*		Could not tolerate 20 mg. Penta. without syncope.	Unsat.
J.G.L.	71 CM	244 122				168 90 (H)*	Response maintained 18 mo. to date	Sat.
L.McC.	45 WF	224 145			194 116 (P)*	220 140 (H)*	Penta. plus Apres. gave best result	Sat.
						169 107 (P)*		
S.McK.	53 CF	234 128	214 125		170 100 (P)*		Same response with veratrum	Sat.
W.MeM.	52 WM	252 127				155 96 (H)*	Response maintained 1 yr. to date	Sat.
R.McM.	55 CM	215 150	223 127	190 120		185 116 (H)*	Previous Hex. Rx. 1 year before	Sat.
R.M.	56 CM	202 131				164 114 (H)*	Records lost, only one pretreatment blood pressure	Sat.
						180 120 (P)*		
R.M.	67 CF	230 136				161 93 (H)*	Response maintained 1 year to date	Sat.
M.M.	52 WF	218 102				116 73 (H)*	Response maintained 2 yrs. to date	Sat.
R.N.	59 CF	234 128	270 115		220 110 (H)*	210 95 (H)*	Unable to tolerate drugs	Unsat.
Z.N.	44 WF	204 139	250 142		193 127 (H)*	231 150 (H)*	No response to maximum dose	Unsat.
A.O.	54 CM	236 127		193 114		138 92 (P)*	Only 40 t.i.d. Penta. required	Sat.
L.P.	35 CF	201 126	205 125	180 120	228 118 (P)*	195 110 (P)*	Developed angina on Rx.	Unsat.
R.P.	34 CM	190 125	152 106	160 110	113 81 (P)*		Uremia improved on Rx.	Sat.
F.M.P.	38 CF	155 110	130 90	118 84		104 70 (H)*	Now maintained on Rauwolfia alone	Sat.
P.P.	55 WM	260 160		128 86		126 96 (H)*	Rx. 2 yrs. on Hex., now maintained on Rauwolfia-Apresoline alone	Sat.
						139 96 (P)*		
G.P.	33 CM	191 132				130 90 (H)*	Now maintained Rauwolfia-Apresoline	Sat.
S.R.	49 CM	233 148		118 115		160 114 (H)*	Still has labile blood pressure	Sat.
C.R.	65 CF	224 131			156 106 (P)*	170 120 (H)*	Rx. converted sustained to labile hypertension.	Sat.
						190 128 (P)*		
W.R.	80 WM	247 125	235 130		230 140 (P)*		Could not tolerate Penta.	Unsat.
N.S.	57 CF	184 120			225 130 (P)*	200 120 (H)*	Asthmatic. Developed severe dizziness on Rx.	Unsat.
R.S.	37 CF	204 127			155 105 (P)*	125 82 (P)*	Expired 4 mos. after Rx. disc.	Sat.
E.S.	32 CM	225 156			179 121 (H)*	180 129 (H)*	Previous vagotomy for ulcer.	Sat.
					159 114 (P)*			
C.F.T.	41 WM	171 115		160 110		149 103 (H)*	Developed angina after 2 yrs. on treatment	Sat.
M.T.	50 CF	270 148	224 128		204 110 (P)*	190 95 (P)*	Blood pressure still labile	Sat.
J.W.	42 CM	230 140		174 120		170 120 (P)*	Now maintained on Rauwolfia-Apresoline alone.	Sat.
D.W.	47 CM	220 110				148 92 (H)*	Response maintained 2 yrs. to date	Sat.
H.W.	37 CM	193 144			160 134 (P)*	155 118 (H)*	Initial Rx. begun in hospital	Sat.
						152 116 (P)*		
L.W.	39 CF	255 143				200 110 (H)*	Refused further Rx. before Rauwolfia used.	Unsat.
E.Y.	59 CF	190 107		188 82		177 80 (H)*	Now maintained Rauwolfia-Apresoline alone	Sat.

(H)*—Hexamethonium
(P)*—Pentolinium

Perhaps this is a situation somewhat analogous to the use of propylthiouracil in Grave's disease where a remission may occur in a certain percentage of cases after prolonged suppressive treatment.

An overall satisfactory response of 73% as shown in chart No. 4 should not be construed as discouraging or indicating inef-

CHART 4

Drugs Used Together	Number of Cases	% Satisfactory Response	Comment
Rauwolfia and Apresoline	40	75 %	Not including 53 cases with additional ganglionic blocking agents.
Rauwolfia and Veratrum	24	75 %	17% satisfactory on Rauwolfia before using Veratrum.
Rauwolfia, Veratrum Apresoline	9	56 %	These were failures from above two groups
Rauwolfia and Ganglionic blocking agents	23	72 %	Only 55% first tried on Rauwolfia alone or Rauwolfia-Apresoline
Rauwolfia, Apresoline and ganglionic blocking agents	43	79 %	Only 50% first tried on Rauwolfia alone or on Rauwolfia-Apresoline
Total number studied	138	77 %	Individual patients responded to more than one combination.
Total number of patients	107	73 %	Percent of patients with overall final satisfactory response

fectiveness of antihypertensive drug therapy. Individual patients demonstrate conclusively that brilliant results can be achieved, and perhaps many of those classified as a poor response could have been better controlled if a period of further regulation in the hospital had been feasible.

SUMMARY AND CONCLUSIONS

An analysis of the treatment of hypertension with combined drugs has been presented. General principles have been discussed in the clinical use of the presently available effective hypotensive agents and the necessity for using two or more drugs together for control of moderate and severe hypertension has been confirmed. A need for all of the four types of drugs has been indicated and the decision of the place for each in therapy has been discussed. The treatment of hypertension with drug combinations is a new concept of extreme importance and should be studied carefully by all those who wish to treat this disease with the best that is available in our present state of knowledge.

The causes of health and therefore the factors important to its evaluation and management are often to be found in the individual's personal and community environment.—Ward Darley, M. D., J. A. M. A., April 30th, 1955.

Tuberculin Test Called Key to Tuberculosis Problem—"The tuberculin test has become the master key to the tuberculosis problem," according to four Minnesota researchers, one of whom is Dr. J. Arthur Meyers.

After a 28-year study of mass tuberculin testing of school children, they made two predictions: that if new antimicrobial drugs work, TB may be cured for the first time in history; and that mass testing may mean "tracking down and destroying the last tubercle bacilli."

The injection of a small amount of tuberculin reveals the presence of tuberculosis earlier than any other method, they said in the September 17 Journal of the American Medical Association. It does so with "uncanny accuracy," and before signs are evident through chest x-ray, they said.

They explained that infected persons become "reactors" to the tests within a few weeks after infection. In this early stage antimicrobial drugs may destroy the bacilli. Later, when the disease reaches the stage where x-ray shows its presence, the drugs may not destroy all bacilli. If nonreactors are tested periodically they can be caught and treated soon after the bacilli "invade" the body.

The best time to start routine tuberculin testing is in childhood, and a widespread movement now is under way to test school children everywhere. Eventually, they said, there will be "no alternative" but periodical testing of all nonreactors.

Persons who have reached the reactor stage and are "destined" to develop lung lesions should be examined periodically so lesions can be discovered as soon as they appear and are most treatable. The high percentage of cases not now discovered until they already have reached the advanced, soon-fatal stage could be found by tuberculin testing in early reactor stages, they said. From then on periodic examinations at least annually could catch 95 per cent of developing lesions while they still can be kept—by present treatment methods—from becoming contagious.

In addition to finding new cases of tuberculosis, the test provides a way of finding unknown contagious cases by checking persons who have been in contact with tuberculin reactors. Eventually "there must come a time" when attempts to trace the source of infection will reveal that most contagious cases already have been found and treated, they said.

The test also may show when adequate treatment has been given. There is reason to believe that when all tubercle bacilli are destroyed the individual will cease to react to the tuberculin injection, they said.

They studied children in 24 Minneapolis parochial schools, beginning in 1926 when almost half of the children were found to have been in contact with tuberculous people or animals or their products. By 1936 the rate had dropped to 18.9 per cent, and by 1944 to 7.7 per cent.

In 1954 only 3.9 per cent of almost the entire school population reacted. School personnel, of a less protected generation, showed a 46.8 per cent reaction.

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THE MONTH IN WASHINGTON

Although Salk vaccine now is coming from the laboratories in encouraging volume, in Washington there still are unresolved questions that may well go beyond the problem of controlling poliomyelitis.

After months of wrangling, Congress this year enacted only one law dealing with the new vaccine. This was an authorization for the allocation of money to states to help finance inoculation campaigns. On this there was a sharp difference of opinion. Some lawmakers wanted to give federal money, but to earmark it for the exclusive use of children who had passed the "means test," that is, whose parents had been officially determined to be unable to pay for the shots. Others would have nothing to do with a bill carrying the "means test."

As finally enacted, the law provides enough money to buy vaccine for only approximately one-third of all children under 20 and pregnant women. That is a concession to those who want a "means test." But the "no-means test" faction was appeased by another provision of the law, a stipulation that in inoculation programs arranged by the state and communities no financial questions could be asked.

It may be that this decision will be final, that Congress will have nothing more to do with this complicated problem, except possibly to add to the 30 million dollars already appropriated to pay for vaccine. But that isn't the way some members of Congress feel. They want to reopen the entire question before the present law expires next February 15. At the very least, these Senators and Representatives want Congress to vote enough money to buy shots for all children in the eligible ages. In fact, those who want the federal government to play a larger role in inoculation programs regard the law now on the books as merely a temporary measure. They are looking forward to reopening the issue.

If this is done, the many questions that the last session couldn't decide again will be before Congress. Here are some of them:

1. Is it the responsibility of the federal government to make free shots available to all, regardless of ability to pay?
2. If there is to be a "means test," should the states or the federal government set the dividing line between the families that can

pay and those that can't?

3. Should the federal government move into the picture and allocate the available vaccine, or should distribution continue along the present voluntary lines?

4. Should the states and communities arrange for all inoculations themselves?

Underlying these questions are some issues that go beyond Salk vaccine. Some persons in Congress believe there should be no limit to the participation of the federal government in public health programs. They would like to see free inoculations not only for poliomyelitis but also for all other communicable diseases for which there is a specific vaccine.

Also, the rambling system of federal control over drugs, with enforcement spread among half a dozen departments and agencies, is under criticism. Some leaders in Congress believe the whole area of federal drug control should be surveyed, and possibly more clear-cut lines of enforcement laid down. One bill on this subject—which was not pressed last session—would give the Secretary of the Department of Health, Education, and Welfare authority to move in and assume control over the distribution and even the use of any drug when the Secretary decided that the public welfare warranted such drastic action.

DIGITALIS THERAPY

In his contribution to the June 1955 number of *Arizona Medicine* (abstracted by James R. Heming, M. D.) Ehrlich states that, in the 180 years that have passed since Withering, digitalis remains as the only drug we have which is effective in congestive heart failure by acting at the source of the difficulty, namely the failing myocardium. There are many different preparations of digitalis which are available to the physician.

Whole leaf digitalis may be given orally or parenterally but is used almost exclusively by the oral route. Approximately twenty per cent of it is absorbed from the gastrointestinal tract. The old tincture of digitalis is little if at all used today, and its chief faults lie, firstly, in the fact that it deteriorates with age and, secondly, in the fact that accurate dosage is not always possible because it is usually dispensed in drops. A similar whole leaf preparation exists from the *lanata* plant and is known as

digilanid. It is little used now and offers no particular advantages.

Digitoxin is probably as widely if not more widely used than any of the other preparations of digitalis. The reason for this, in the light of its pharmacology and physiology, is a little difficult to understand. It was originally very popular because the medical profession was told that 1.2 milligrams of the drug would suffice to digitalize any and every cardiac patient. Actually, the digitalizing dose of this preparation varies from 1.2 to 2 milligrams, and the rate of excretion will vary from individual to individual. Probably no more than forty per cent of the drug is excreted within two weeks after its use is discontinued, and it may take anywhere from four to six weeks to rid the patient completely of this preparation.

A good present-day, all-purpose digitalis for general use is Gitaligin. It is completely absorbed from the gastrointestinal tract, and, following discontinuance of its use, it is almost completely excreted in anywhere from four to seven days. It has one particular advantage which is unique and places it apart from all other digitalis preparations. The digitalizing dose is approximately one-third of the toxic dose. With all other preparations which are available to us, the digitalizing dose is two-thirds of the toxic dose.

In Gitaligin, we have a preparation which has a wider margin of safety and which will do anything therapeutically that any other preparation of digitalis will. It may be said to be the choice except in advanced myocardial disease with much fibrosis where excessive irritability is feared. In this particular case, the use of digoxin is recommended.

PSYCHIATRIC CARE IN GENERAL HOSPITALS

"All hospitals should be in a position to provide psychiatric diagnosis and consultation and care for the acute and milder forms of mental and emotional problems," Dr. Francis J. Braceland, director of the Institute of Living, Hartford, Conn., said in an editorial published in the August issue of *Hospitals*, journal of the American Hospital Association.

Dr. Braceland, a psychiatrist, was a member of the Medical Services Task Force of

the second Hoover Commission, and conducted a special study of the mental illness problem for the Commission.

In his guest editorial in the AHA journal, Dr. Braceland said that "it is only through the interest and cooperation of physicians and hospitals in the community that real progress can be made in the diagnosis, treatment and prevention of mental disorders and the myriad physical disabilities that are rooted in the emotions."

He said, "The increasing provision of psychiatric units in general hospitals is a heartening trend of medicine in mid-century, but as yet it is only a trend.

"It cannot be emphasized too strongly that all hospitals should be in a position to

provide psychiatric diagnosis and consultation and care for the acute and milder forms of mental and emotional problems which are encountered daily. . . .

"The distaste for, or the misunderstanding of, psychiatric problems is an incubus that retards the progress of medicine."

The provision of adequate facilities and personnel for psychiatric work in general hospitals "will be amply repaid," Dr. Braceland said, "in many ways in benefits to both the hospitals and to the society that hospitals are dedicated to serve. Psychiatric patients are not a people apart. They are 'thee and me' under the influence of time, pressure and circumstances."

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

DID YOU KNOW?

W. A. Dozier, Jr.
Director of Public Relations

"The sole and only legitimate end of government is to protect the citizen in the enjoyment of life, liberty, and property, and when the government assumes other functions, it is usurpation and oppression."

Can you place that quotation? It sounds quite familiar as do so many things one reads. Yet, most Alabamians would be surprised to learn that the above passage is from the Constitution of our state. This writer was.

Recently, while reading "Thoughts on Freedom" by Mr. Thurman Sensing, my eyes were attracted to "Constitution of Alabama." The above quotation was given. In ruminating on the matter, one wonders how many lawyers in the state would recognize it, not to mention the rest of the public who seldom if ever thinks of the Constitution.

The next thought that comes to mind makes one consider whether we, right here in Alabama, have lived by this. Perhaps one should ask whether or not our laws of the past few years have lead us away from the belief stated above. Has the government assumed other functions? Are we approaching or have we passed the state of usurpation and oppression? Has our thinking on the role that government should play

changed from that expressed by the writers of Alabama's supreme law?

These questions, and others that immediately come to your mind, need to be considered. You and only you can answer. However, there has been talk of a constitutional convention. If such were to occur, these and many other pertinent questions would have to be faced.

Perhaps it is not too bad to be surprised when you learn something, as this writer has done; but one would be remiss if it did not cause him to think.

DO IT TODAY

E. L. Gibson, M. D.
Member, A. M. E. F. Committee

Many physicians in Alabama have already made contributions to the American Medical Education Fund; some who intend to within the next month or two have not yet done so; some have not yet made up their minds whether they want to contribute or not.

Recently we received copies of the Oath of Hippocrates, mailed out by the Public Relations Office of the Medical Association of the State of Alabama. I was glad of the opportunity to refresh my memory on this oath to which all of us as doctors of medicine subscribed upon entering our professional careers. "... I will keep this oath and

stipulation: to reckon him who taught me this art equally dear to me as my parents, to share my substance with him and relieve his necessities if required;”

In subscribing to this oath we pledged ourselves to assume a responsibility to aid in furthering the knowledge of medicine and to support those institutions from which we received our training. Our contribution to the A. M. E. F. is a means of sharing our substance with those who taught us this art.

By liberally supporting our program of medical education, the medical profession is able to retain the right to determine the policies of our medical colleges. When it becomes necessary for them to look to the

Federal Government for their support, then we surrender control into government hands.

We, as a profession, have opposed “government medicine,” contending that we are cognizant of our obligations to humanity and that we will uphold the principles of ethical service upon which the medical profession was founded. If we do not discharge our obligation to support the program of medical education, we are compromising the issue of government control.

Our goal for 1955 for the doctors of Alabama is \$10,000. Let’s mail our checks today and thus share our substance with and relieve the necessities of those from whom we received training in medicine.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION
D. G. Gill, M. D.
State Health Officer
ALABAMA’S PUBLIC HEALTH NURSE
SERVES YOU
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Nadine Pitts, Director
Division of Public Health Education

When most of us think of teaching, our thoughts tend to return to the classroom. In the mind’s eye, we see a teacher and a group of pupils. The teacher may employ a variety of methods in her job of imparting some special knowledge to the class. If the subject at hand is mathematics, the instructor may illustrate by writing out an equation or problem on the blackboard. Or if it is biology, she may display posters depicting examples of animal and plant life for students to view at their leisure.

However, the process of education—the job of teaching and learning—does not have to be, indeed it is not, restricted to the classroom. There is one educational program being carried on today in every Alabama county without benefit of school houses. The program is the work of the public health nurses who are assigned to the health department in your county.

The public health nurse may be a familiar figure to you. You may have seen her in your goings and comings around your town. You, perhaps, think of her only as the woman in a blue uniform, who carries a little

black bag, and who is stationed at the county health office for the primary purpose of giving immunizations—to prevent your contracting some contagious disease. Or occasionally, you may think, she leaves the office to go to a nearby school to help in the physical examination of the pupils enrolled there.

But Alabama’s public health nurse is much, much more than a giver of immunizations. She is a vital member of the public health team headed by the county health officer. She is a community leader. Above all, she is a public health teacher. No school room would be big enough to hold her “pupils,” for they are the families, in fact all the people in the community. At the same time, the public health nurse is a learner. As is the case with most if not all teachers, the nurse adds to her store of knowledge continually during her experiences with people.

Although it is not commonly known, the services of Alabama’s public health nurses are available to everyone in the state. The help she can and does give is not for just one or two specific groups. A family in a North Alabama town may need help in caring for a daughter just returned from a tuberculosis sanatorium for convalescence at home. A call to the county health office will bring a visit from the nurse, who instructs other family members in the pa-

tient's needs and how they can help to meet them. The nurse's aid, in many such cases, may well mean the difference between relapse and successful recuperation.

Meanwhile, 250 miles away in a South Alabama community, a mother and father discover that their 10-year-old son is a diabetic. Their family doctor, who diagnosed the case, prescribed daily doses of insulin. The parents may need the help of a public health nurse; they may need to learn how to administer the insulin with a hypodermic needle. In addition, the chances are good that both the parents and the boy can use the helpful information on care and management which the nurse can provide. The child's condition may prevent him from eating certain kinds and amounts of foods—candies and desserts which he is accustomed to having. Moreover, the parents may find the going difficult. It may not be easy to convince the youngster that he should abide by the diet which has been prescribed in order to safeguard his present and future health. Here again, because the nurse has had experience in caring for diabetics, she can help to make the going easier for all concerned. She can explain why the child needs to guard against any type of wound or infection—much more so than other persons. Also, she can point out the necessity of seeking medical treatment for even minor injuries. These are only a few of the factors in the management of diabetes which the nurse can bring to the parents in this case.

Mothers and children come in for their share of the public health nurse's skills. During the year 1954, 3,191 maternity clinics were conducted in 50 Alabama counties.

A total of 149 physicians participated, and 54,238 patients were admitted. In the same year, 619 well-baby clinics were held in 21 counties, with 46 doctors participating and with 11,198 patients admitted. Although we do not know exactly how many nurses were on hand for these clinic sessions, we can be sure that one or more were present at each. The public health teacher was there, as well as in the home, helping mothers-to-be understand why they need early and regular medical care from the doctor, and giving emotional support to those who need it, as well as aiding in the preparations that must be made for the new baby.

In well-baby clinics, and sometimes in

the home, young mothers look to Alabama's public health nurses for help in learning to care for their babies. The help desired may be only the proper way to bathe the infant, or advice about feeding the baby—things that are apt to "come easy" for experienced mothers but which may be trying problems for first-time parents.

There are other ways in which the nurse teaches health. She may need, in some instances, to impress upon parents the importance of having children immunized against contagious diseases. The time spent in convincing them that there is value in vaccination against smallpox, diphtheria, whooping cough and tetanus may often be many hours more than the few minutes needed to give such immunizations. Thus, it is not hard to see why the administration of vaccines can be considered actually only a relatively small part of the nurse's job.

The county health nurse is an important link in the community "chain." Because she is closely associated with families in their homes, she can bring to them an awareness of other public health services. It may be the work of the vital statisticians, who prepare and issue birth certificates. Or it may be the county sanitation officer, whose advice is needed to work out a plan of rat control.

The nurse's assistance extends still farther, beyond what is required. Through her, people learn not only of public health services: they learn about the assistance other agencies are set up to give, as well. Because the nurse knows just what community resources are available, she can help to bring a child with a speech handicap in Jefferson County, say, to the attention of the Crippled Children's Clinic. Or the health nurse in Houston County may visit a family who needs financial aid—help that they may be able to obtain from the public welfare department or some voluntary agency in the community.

Because their needs are greater, some people in the community benefit more from the health nurse's skills than others. The examples we have used above are fictional; they might have happened in just this way, but as far as we know, they did not. However, a Washington County nurse tells this story of a real family in her community who received a variety of services from the health department.

The head of the household, a man 54 years

old, was disabled from a heart condition. He had five unmarried children at home, as well as a son, daughter-in-law and their four children. Their only income was a small check from the welfare department and the married son's pay from part-time jobs.

A daughter 17 and a son 8 were ill with rheumatic fever.

The nurse tells us that this family was admitted to nursing service, and that she gave the children the immunizations they needed. Afterwards, during each visit to the home, she discussed with the family the proper diet and care of rheumatic fever patients. A short time later, one child in the family became ill with infectious hepatitis—a disease he contracted from three infected members of a family who had just moved into the community. The health department, in cooperation with the family doctor, gave gamma globulin to all the contacts of these cases, primarily in an effort to prevent the spread of this disease to the rheumatic fever patients. The attempt was successful, and no more cases of infectious hepatitis were reported.

After that, the mother was attacked by a house cat while she was hanging the family wash. The doctor recommended rabies treatment, which was provided without cost by the central public health laboratory in Montgomery, at the request of the county health department. The doctor and the health nurse cooperated in administering the treatment.

Meanwhile, the younger rheumatic fever patient did not respond well to the home care he was receiving. The health nurse then referred him to the Crippled Children's Service, which, in turn, made arrangements for the removal of his tonsils and adenoids at its Mobile clinic. When daily doses of penicillin were advised after the operation, the Mobile heart clinic maintained by the State Health Department sent a year's free supply of this drug. Both rheumatic fever victims were able to return to school a short time later and to attend regularly.

There is still more to this family's story. The daughter-in-law was benefiting from the health department's prenatal service. At the same time, the nurse noted that the young woman had a lesion on her leg which had been "removed once, four years ago, by a preacher." The lesion had become sore and inflamed. After her baby was delivered, the nurse and the doctor persuaded

the girl to have the lesion removed at the State Health Department's tumor clinic in Mobile. Tests revealed that the lesion was malignant and far advanced. However, glands were removed during surgery, skin was grafted to the area where the cancer was removed, and healing followed.

Although this Washington County family benefited directly from the health department's services and the nurse's skills, the rest of the community was helped as well. Their gain was an indirect one. Perhaps the community's benefit can best be seen in the handling of the infectious hepatitis cases. A communicable disease which conceivably could have spread to many other persons was successfully routed, with the potential victims thus protected.

We have spoken at length about what the public health nurse does. But what is Alabama's average public health nurse like? She is usually a woman between the ages of 25 and 50. She perhaps has a family, and a home of her own. She, of course, is a registered nurse. In many instances, she has some special training in public health practice. Her take-home pay is not a large amount of money but it often allows for some "extras" above necessities.

She is a special kind of person; she needs to be so that she can work with people. She cultivates a personality which is not frustrated by prejudice, poverty or ignorance. One writer has said that the public health nurse is the sort of person who can help people to help themselves so that they like it. However, she could not achieve such results if her thoughts had a narrow scope, if she believed that all families should work and play according to a preconceived pattern. Her greatest sense of achievement often comes, not from the family which accepts her help readily, but rather from work with the person who seems at first reluctant to get involved in the strange, new ideas and plans she has to offer—plans and ideas that mean a change in the person's way of life.

Finally, the average public health nurse in Alabama is a very busy person. As in other parts of the country, there is a shortage of these specially trained workers in the state. So if your health nurse does not spend as much time with you as you might like, you can know there are many, many other demands for her services from other families during the hours of each day.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

July 1955

Examinations for diphtheria bacilli and Vincent's.....	153
Agglutination tests	761
Typhoid cultures (blood, feces and urine)	606
Brucella cultures.....	0
Examinations for malaria	112
Examinations for intestinal parasites.....	2,883
Serologic tests for syphilis (blood and spinal fluid).....	21,400
Darkfield examinations.....	1
Examinations for gonococci.....	1,522
Examinations for tubercle bacilli.....	2,775
Examinations for Negri bodies.....	83
Water examinations.....	2,286
Milk and dairy products examinations.....	4,991
Miscellaneous	934
Total	38,507

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1955

	June	July	E. E.* July
Typhoid & paratyphoid fever	6	5	7
Undulant fever	3	1	2
Meningitis	11	14	5
Scarlet fever	35	19	17
Whooping cough.....	241	221	75
Diphtheria	1	3	10
Tetanus	3	5	4
Tuberculosis	188	270	223
Tularemia	0	0	0
Amebic dysentery	1	1	1
Malaria	0	0	11
Influenza	67	47	25
Smallpox	0	0	0
Measles	169	172	129
Poliomyelitis	25	35	74
Encephalitis	1	0	0
Chickenpox	71	39	16
Typhus fever	3	0	19
Mumps	191	121	60
Cancer	491	606	331
Pellagra	1	0	2
Pneumonia	168	113	96
Syphilis	167	232	609
Chancroid	3	5	14
Gonorrhea	363	533	485
Rabies—Human cases	0	0	0
Positive animal heads	25	14	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR APRIL 1955, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During April			Rates* (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	5744	3561	2183	21.6	22.8	21.8
Deaths	2041	1251	790	7.7	7.4	8.2
Fetal deaths	136	59	77	23.1	24.7	24.1
Infant deaths—						
under one month	126	68	58	21.9	24.5	23.8
under one year	178	92	86	31.0	33.9	34.6
Causes of Death						
Tuberculosis, 001-019	34	16	18	12.8	16.1	24.1
Syphilis, 020-029	10	2	8	3.8	4.2	5.4
Dysentery, 045-048	2		2	0.8	1.2	0.8
Diphtheria, 055	1	1		0.4		0.4
Whooping cough, 056	3	2	1	1.1		0.4
Meningococcal						
infections, 057	1		1	0.4	1.5	0.4
Poliomyelitis, 080, 081					0.4	0.8
Encephalitis, 082, 083						0.4
Measles, 085					0.8	3.5
Malignant neoplasms,						
140-205	277	197	80	104.0	85.2	77.8
Diabetes mellitus, 260	21	14	7	7.9	11.9	7.4
Pellagra, 281	1		1	0.4	0.8	2.3
Vascular lesions of						
central nervous						
system, 330-334	273	154	119	102.5	102.8	101.5
Rheumatic fever, 400-						
402	4	1	3	1.5	1.5	1.6
Diseases of the heart,						
410-443	669	447	222	251.2	237.1	252.1
Hypertension with						
heart disease, 440-						
443	144	64	80	54.1	51.3	55.6
Diseases of the						
arteries, 450-456	49	35	14	18.4	12.1	13.8
Influenza, 480-483	17	6	11	6.4	6.1	9.6
Pneumonia, all forms,						
490-493	53	25	28	19.9	19.7	29.2
Bronchitis, 500-502	1		1	0.4	0.8	1.2
Appendicitis, 550-553	2	2		0.8	2.3	1.2
Intestinal obstruction						
and hernia, 560, 561,						
570	10	6	4	3.8	3.8	3.8
Gastro-enteritis and						
colitis, under 2,						
571.0, 764	2		2	0.8	2.7	1.9
Cirrhosis of liver, 581	9	9		3.4	4.9	2.7
Diseases of preg-						
nancy and child-						
birth, 640-689	4		4	6.8	9.8	17.2
Congenital malforma-						
tions, 750-759	28	21	7	4.9	4.0	6.0
Accidents, total,						
800-962	137	98	39	51.4	55.4	59.1
Motor vehicle acci-						
dents, 810-835, 960	55	41	14	20.7	21.3	24.2
All other defined						
causes	356	188	168	133.7	120.4	141.6
Ill-defined and un-						
known causes, 780-						
793, 795	77	27	50	28.9	41.8	38.0

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

BOOK ABSTRACTS AND REVIEWS

Handbook of Pediatrics. By Henry K. Silver, M. D., Associate Professor of Pediatrics, Yale University School of Medicine, New Haven, Conn.; C. Henry Kempke, M. D., Assistant Professor of Pediatrics, Univ. of California School of Medicine, San Francisco; and Henry B. Bruyn, M. D., Assistant Professor of Pediatrics and Medicine, Univ. of California School of Medicine, San Francisco, and Assistant Clinical Professor of Pediatrics, Stanford University School of Medicine, San Francisco. Cloth. Price, \$3.00. Pp. 548. Los Altos, Calif.: Lange Medical Publications, 1955.

A handbook is said to be a small guide or manual, but that definition is not adequate to describe this excellent volume. A textbook in outline form would be much more accurate. There are 529 pages of small type presenting almost every subject one finds in a large pediatric text. The grouping of conditions is standard, being divided into anatomical listing, as diseases of the skin or the respiratory tract, for example, or sections concerned with types of pathology, as neoplastic, infectious, collagen, and other groups of illnesses. There is even a section illustrating pediatric procedures, such as how to do a cut-down or a jugular puncture. Two important chapters on pediatric emergencies and poisons and toxins are especially valuable. In spite of its small size, the handbook has not one, but two indices: the first being general listings which can be very quickly located from the front, and the second occupying the time-honored pages at the back, with very complete classifications.

As an example of the completeness of this pocket-sized pediatric gold mine, fibrocystic disease of the pancreas was reviewed. Here one finds a general outline of the celiac syndrome, plus a differential table giving clinical and laboratory findings of celiac disease, starch intolerance, fibrocystic disease, and infantile steatorrhea. The general outline concerns the clinical and laboratory findings, treatment and prognosis of all four conditions. The treatment of fibrocystic disease is outlined in three general headings: 1) treatment of dietary deficiencies, 2) treatment and prophylaxis of pulmonary infections, and 3) treatment of complicated phases. This information is very complete and gives recommended doses of antibiotics, the composition of an aerosol mixture, diets, pancreatin dosage, and even how to perform the technic of duodenal drainage and the stool test for tryptic activity using photographic film.

There are no wasted words in the entire book. The inside of the front cover has no room on which to write one's name, for it is occupied by a table giving weight, height and head circumference figures from birth to sixteen years; and along the edge of the page is a centimeter ruling. The back cover contains a table listing normal values of blood constituents. In fact, the book contains a great number of tables giving a ready comparison of many conditions or facts most

often desired. These well-prepared tables must be seen to be appreciated.

This reviewer must add one personal note. The handbook is published by a classmate, Dr. Jack Lange, and during the years in medical school he prepared excellent notes which his fellow students willingly purchased. Now he publishes many books of this type; for example, the Handbook of Obstetrics and Diagnostic Gynecology and Handbook of Medical Treatment, and each is revised every two years. Thus the book is not the result of someone's yearn to write a book. It is one of a series published by a physician who should know what we want and need. This book is one that every student, intern or resident dealing with pediatrics should have; it should be at the nurses' station on every pediatric ward, and the practicing physician will not find a greater bargain for three dollars. Each new American mother may have her copy of Spock's book on infant care, but at long last we pediatricians have our Handbook of Pediatrics.

W. A. Daniel, Jr., M. D.

Pomp and Pestilence. Infectious Disease, Its Origins and Conquest. By Ronald Hare, M. D. Cloth. Price, \$5.75. Pp. 224. The Philosophical Library, Inc., New York, 1955.

The flower of Greek civilization, the "mighty" Roman empire, the Dark Ages and, yes, even insights into the life of Paleolithic and Neolithic man come alive in this intriguing and highly readable book. But it is a style of history quite unfamiliar to most: the decisive victories or the withering defects of war are accounted for, not in the political or economic vein to which we are accustomed in the classroom, but rather bacteriologically and epidemiologically.

Our author is professor of bacteriology in the University of London, at St. Thomas' Hospital Medical School. His impressive command of history is evident at the turn of every page, and qualifies him well to tell us the story of man and his parasites.

Much of the disease saga Professor Hare records may not be new to physicians, who, undoubtedly, become well-versed on the subject during their medical training period. However, just as political histories vary widely with historians, so medical reviews differ from observer to observer. Thus, Dr. Hare's explanation of the anglophobia which affects some persons in the United States—which he ascribes to the provision of soup kitchens and public works for proud Irishmen during the typhus epidemic of 1846-47—may be a revelation even to some physicians.

At any rate, the layman reader will come across many explanations for past events which are strange and new, and it is he, perhaps, for whom this volume holds more challenge and in-

terest. This reviewer is amazed, and trusts that others will be, that the Chinese *Book of Herbs*, compiled about 3,000 B. C., tells of a drug by the name Ch'ang Shang which was useful for fevers, and which modern research has shown to be based on fact!

Author Hare leads off, in his first chapter with a discussion of the different forms parasites and parasitism may take—symbiosis, commensalism and pathogenesis. In subsequent chapters, he considers man and his parasites—a review of endemic disease; then the abnormal outbreaks of disease or epidemics caused by these organisms; and, next, a discussion of disease theories, followed by two treatises: one on the reaction of communities to disease afflictions and another on the reactions of individuals. His concluding chapter is a summary of disease prevention and control which have been evolved to prevent parasites from diminishing populations.

Some scholars perhaps will quarrel with a few or many of Professor Hare's theories. Especially is this true of his conjectures of the status of disease parasites among early men in the dawn of history. But he himself freely admits that they are just that, i. e., calculated guesses based on well-documented archeological discoveries.

Moreover, optimistic political economists will take issue with the author, who seems to accept, if somewhat reluctantly, the theories of his fellow Englishman Malthus. Many of us prefer to think that countries of the East are not and will not be inevitably doomed to slow destruction by malnutrition—that is, if and when they attain the degree of preventive medicine the West has already achieved. Rather, we choose to believe that our atomic age can and will find solutions to the problem of feeding all the world's people.

Nadine E. Pitts

Communicable Diseases. By Franklin H. Top, A. B., M. D., M. P. H., F. A. C. P., F. A. A. P., F. A. P. H. A., Professor and Head of the Department of Hygiene and Preventive Medicine, and Director, University Department of Health, State University of Iowa; Consultant, Communicable Disease Center, U. S. P. H. S., Atlanta, Georgia; Clinical Professor of Preventive Medicine and Public Health, Wayne University College of Medicine; Extramural Lecturer in Infectious Diseases and Epidemiology, School of Public Health, University of Michigan; and Collaborators. Third edition. Cloth. Price, \$18.50. Pp. 1208, with 109 text illustrations and 15 color plates. St. Louis: The C. V. Mosby Company, 1955.

There is no disagreement that Top's *Communicable Diseases* is tops in its field. Now in its third edition, its popularity does not wane. Indeed a Health Officer feels more comfortable with the volume at his right hand for it is a reliable text to which he will want to refer often for information as to "therapeutic management, prevention, and control" of the communicable diseases.

Douglas L. Cannon, M. D.

Pediatric Diagnosis. By Morris Green, M. D., Assistant Professor of Pediatrics, Yale University School of Medicine; and Julius B. Richmond, M. D., Professor and Chairman of the Department of Pediatrics, State University of New York College of Medicine at Syracuse. Cloth. Price, \$10.00. Pp. 436, illustrated. Philadelphia: W. B. Saunders Company, 1955.

In comparison with most medical texts, this book is small. But the size is unrelated to the amount of work which must have gone into its preparation. The old adage concerning good things in small packages seems to hold true here.

The title "Pediatric Diagnosis" is aptly chosen, for the book is more than a discussion of physical diagnosis. The authors state in the preface: "The emphasis throughout this book is on competence in history taking and physical examination; on the accomplishment of *early* diagnosis; on the application of information from the basic sciences to clinical situations; on the development of a *functional* knowledge of physical, physiologic and psychologic growth and development; and on differential diagnosis." One must admit that this is a somewhat herculean task, and although Hercules took but one day to clean the Augean stables, the authors have at least removed much of the detritus that clutters up medical writings and given condensed, authoritative statements in line with their proposal.

The 182 pages on physical examination are spent, not in directions on how to percuss a heart or similar technics, but give essential points which should be found during an examination and frequently a discussion of these findings. As a minor criticism, the authors assume a reader will know hundreds of syndromes, and frequently the names of "discoverers-of-syndromes" are unfamiliar. The section on signs and symptoms, contained in 166 pages, is well condensed, yet where a symptom or syndrome can be understood by a more thorough discussion, this is given. The book concludes with fifty pages on health supervision which is assuming greater importance for the practicing physician.

A unique feature of this solid volume is the placement of several authoritative references, not at the end of a section, but following each presentation of a symptom complex or diagnostic findings. This makes it possible for the reader to quickly find more material concerning a specific problem if it is needed.

In summary, this is a book that is different. It is a valuable addition to one's library for day to day use; or, if one should tire of detective stories, it will provide a most comprehensive review of physical diagnosis as well as symptoms related to many diseases.

W. A. Daniel, Jr., M. D.

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SURGICAL DISEASES OF THE ESOPHAGUS

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Montgomery, Alabama

The purpose of this paper is to evaluate the present status of the surgical treatment of certain lesions of the esophagus. Progress in this field has been slow due to the inaccessibility of the organ and to the frequency of surgical complications. In the last two decades, however, satisfactory surgical approaches have been developed for all regions of the esophagus. Likewise, surgical complications and operative mortality have been lowered to a point where many patients who would have previously been considered hopeless can now be successfully operated upon.

Anatomically, the esophagus is a musculo-membranous tube about twenty-five centimeters long beginning at the pharynx and ending at the stomach. It differs from other portions of the gastrointestinal tract in several important ways. It is not covered by serosa nor is it in contact with a parietal serosal layer such as peritoneum or pleura. Surgeons have come to rely upon serosa of small and large bowel for its good healing qualities, and upon peritoneum and pleura for their ability to withstand infection in case of anastomotic leaks. These protective mechanisms are absent in the esophagus. The muscular portion of the esophagus consists chiefly of longitudinal fibers, the contraction of which always shortens the esophagus, putting tension on suture lines. This makes it almost impossible to resect more than a three or four centimeter segment and do an end-to-end anastomosis. The stratified squamous *mucosa* of the esophagus is the strongest layer available for anastomosis. The contents of the esoph-

agus, however, are always grossly contaminated and the esophageal mucosa has low resistance to acid gastric juice. When one considers the above, it is easily understood why an anastomosis and resection involving the esophagus is much more difficult to perform successfully than an anastomosis involving small or large bowel or stomach. Two things are essential for a successful anastomosis of the esophagus: first is the absence of tension on the suture line, and second is a technically adequate anastomosis, using interrupted sutures well placed with great care.

Diagnosis of esophageal disease or dysfunction is, of course, necessary before a surgical procedure can be done. This is not difficult once the physician decides to have this organ thoroughly investigated. It consists of two things. First, a barium swallow is done with fluoroscopy. If this is negative, and disease is still suspected or if a tumor is seen on barium swallow, then the second, esophagoscopy, is done. Biopsies are taken of all suspicious lesions. The entire lumen of the esophagus can be visualized, indirectly by x-ray and directly by esophagoscopy. The cardinal symptom of all esophageal disease is difficulty in swallowing. We have been taught to ask patients, "Do you have alternating bowel habits? Do you pass blood from the rectum?" Likewise, we should ask the patient with gastrointestinal symptoms the question, "Do you have trouble swallowing your food?" If he answers "Yes" to the question, the physician should seriously consider esophageal disease, and carcinoma especially if the patient is a male of thirty-five years or over. If the patient states that he has difficulty in swallowing, we frequently hand him a large

glass of water and ask him to drink it rapidly. The patient with an obstructive disease of the esophagus very seldom drinks anything rapidly or gulps his food. Instead, he sips it and takes it very slowly through habit.

BENIGN DISEASES OF THE ESOPHAGUS

Strictures of the Esophagus: These consist of several types. There are congenital strictures, postoperative strictures, and strictures due to chemical burns. Some congenital strictures may be excised and an end-to-end anastomosis done if they are not over three or four centimeters in length. This is almost never true of lye strictures because they are longer and frequently multiple. There are two schools of thought on the early treatment of lye strictures and chemical burns of the esophagus. The Salzer method of early dilatation is popular in some sections, while others think it is better to treat these strictures conservatively for four to six weeks and then carefully esophagoscope the patient, passing a dilator through the esophagoscope and later starting blind dilatations. A handy and safe dilator for any esophageal stricture in the average doctor's hands is a Hurst mercury-filled bougie. These come graduated from small to large sizes and can be swallowed by the patient and allowed to pass by gravity. Little harm can be done with this method. If the patient has a gastrostomy, Tucker retrograde bougies are good. Frequently a string is swallowed and allowed to pass for several yards into the small intestines and a mixture of other dilators are passed over the string. All of these methods are good when indicated. Several cases of death have been reported due to the entwining of a swallowed string around an enterostomy loop, as in gastroenterostomy or an entero-enterostomy after a total gastrectomy.

Recently, Buford of St. Louis has publicized a method of resection and esophago-gastrostomy for these strictures. He states that no traumatic stricture is cured by dilatation. If the stricture is entirely circumferential, it will probably continue to give trouble. It is not necessary to remove the strictured segment, since it is usually bound down by adhesions and is very vascular and causes no trouble when left in as a blind loop.

The Esophageal Diverticulum: This disease is not uncommon. It consists chiefly

of two types, the pulsion type and the traction type. The pulsion-type diverticulum usually occurs at the subpharyngeal or pharyngo-esophageal region. There is a weakness in the midline portion between the fibers of the inferior constrictors of the pharynx. The pulsion-type diverticulum usually presents through this weakness and finally presents to one side, generally the left. Patients complain of nausea, noisy swallowing, food lodging in the throat, and regurgitation. Diagnosis is usually made on x-ray. Most doctors resect these diverticula at one stage. However, there are cases when the two-stage operation is advantageous. If one drains a one-stage operation and the wound becomes infected, he still will have prevented a mediastinitis. Traction diverticula are usually caused by traction from a nearby inflammatory lymph node. The base is generally broad. Therefore, food does not become lodged in the diverticulum and surgery is seldom necessary. Epiphrenic diverticula are occasionally seen and, if large, have to be removed through a thoracotomy. Otherwise they are left undisturbed.

Cardiospasm: The great majority of these patients are handled medically with drugs and dilatations. About 10% get relief from a single dilatation and 75% get relief from repeated dilatations. When these patients do not respond to conservative measures and two courses of dilatation do not give relief, surgery has to be considered. The Grondahl procedure, which resembles a Finney pyloroplasty, is most commonly used in this country. However, recently, the Heller operation, which is so common in England, is being used more and more. This consists of an esophago-cardio-myotomy, with a longitudinal incision extending down to the mucosa similar to a Ramstedt operation. This is simpler than the others and seems to give about as good results. Occasionally, a gastrotomy will have to be done and the index finger placed through the cardia to judge the depth of the wound. The Wendel procedure is a longitudinal opening and a transverse closure like a Mikulicz pyloroplasty. Occasionally, the Pribram operation is necessary. This is a resection of the strictured segment and esophagogastronomy. All of these procedures have the same complication, namely, recurrence, with pain and peptic esophagitis. The difficulty is in knowing how large to make the opening and still maintain continuity of the cardiac

“sphincter.” If stricture recurs, esophageal dilatation is usually adequate to allow swallowing.

Benign Tumors: These tumors may be mucosal, such as pedunculated fibromas; intramural, such as leiomyomas; or periesophageal, such as lipomas or fibromas. The intraluminal benign tumors usually require resection by longitudinal esophagotomy and closure. Extraluminal leiomyomas or lipomas generally cause bulging into the lumen and are diagnostic problems. When diagnosed they should be removed without entering the lumen, if possible, by excision and closure of the defect.

MALIGNANT TUMORS OF THE ESOPHAGUS

Unfortunately, over 90% of the tumors of the esophagus are carcinoma and this is a bad disease, especially if the tumor is above the mid-thoracic portion of the esophagus.

In order to get an idea of the frequency of this disease in Alabama, the record librarians of several hospitals were asked how many cases of carcinoma of the esophagus they had in 1954. These were the figures furnished:

St. Margaret's Hospital, Montgomery	4
St. Jude's Hospital, Montgomery	5
Norwood Clinic, Birmingham	0
Jefferson-Hillman, Birmingham	11
City Hospital, Mobile	0
Providence Hospital, Mobile	3
Mobile Infirmary, Mobile	5
Total cases	23

The average patient with the diagnosis of carcinoma of the esophagus has about nine months to live if palliative treatment alone is given. This consists of bouginage, dilatation, intubation, and gastrostomy. These procedures have no effect on the prolongation of life but are important in palliation until the end arrives. With an obstructing lesion, these are a very wretched nine months. The patient cannot swallow his food or his saliva. He seems to secrete more saliva than the normal person and drools continuously. This drooling continues even in his sleep, making his nights wakeful and miserable. Pulmonary complications are not uncommon, due to aspiration. The surgeon should use every possible means to reestablish the continuity of the gastrointestinal tract. This gives the best palliation, even if all of the cancer cannot be resected and a cure not be effected.

Figures of carcinoma of the esophagus, while bad, are not too much worse than those on carcinoma of the stomach and lungs. Yet more pessimism exists regarding carcinoma of the esophagus than either of the above organs. Recently, Priestley, reporting on gastric carcinoma, stated that 80% were explored, 44% resected, hospital mortality was 8%, and five-year survival was about 14%. Sweet, reporting on carcinoma of the esophagus, gives 85% explored, 65% resectable, 17% hospital mortality, 17½% five-year survival for low esophagus and cardia of the stomach lesions, and 4% five-year survivals for mid-thoracic lesions. Merendino and Mark reported on 100 cases of epidermoid carcinoma of the esophagus and found the average age to be about 62 years. Thirty four (34) per cent of the lesions were resectable for cure theoretically. The disease was localized to the esophagus and surrounding resectable lymph nodes. When one considers operative mortality and mortality from other causes in this age group, the curability rates are reduced to about 20%. In 1913 Torek first successfully resected a carcinoma of the thoracic esophagus. The patient lived thirteen years and died of unrelated causes. In 1938 Drs. Phemister and Adams did their first successful resection of carcinoma of the esophagus. There were glands along the upper part of the lesser curvature of the stomach but despite this the patient is still alive, sixteen years post-operatively. Sweet reports 40% five-year survivals in patients who had no nodes at time of operation.

The survival rates for carcinoma of the cervical and upper thoracic esophagus are most discouraging. In 1942 Wookey described his skin tube for reconstruction of the cervical esophagus. This is a very satisfactory method of closure for defects of the cervical esophagus if one could only resect the carcinoma and surrounding tissues with all metastases. Another method for reconstructing the cervical esophagus is using the split thickness skin graft over a stint of wire mesh formed into a tube and sutured to the pharynx and cervical esophagus. This has the advantage of being a one-stage procedure. If the carcinoma of the cervical esophagus cannot be resected, it is wise, if possible, to reestablish the continuity by doing an anastomosis proximal to the lesion, using stomach, jejunal loop, or a combination of jejunal loop and skin tube. Yudin

and Ravitch advised bringing the subcutaneous jejunal loop as far cephalad as possible and splicing it with a skin tube. This has the advantage of not causing a fatality in case the jejunal loop becomes gangrenous. Carcinoma of the lower esophagus and cardia of the stomach is the most satisfactory of the entire group to treat. An esophagogastrostomy, usually through a left thoracotomy through the bed of the 8th or 9th ribs, will suffice. It is the consensus in most sections of the country that all patients that can stand an operation should be explored and the resectable lesions resected for cure or palliation. If the lesion cannot be resected, some of the above methods should be used to reestablish continuity for palliation. If all of these fail, then deep x-ray therapy and some sort of palliation, like gastrostomy or bouginage, should be done.

SUMMARY

Diseases of the esophagus are common and many of them can be treated successfully by surgery. Carcinoma remains a formidable disease but all cases should be given a chance at palliation or cure, depending on the extent of the disease at time of surgery.

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DIVERTICULITIS OF THE COLON

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Diverticulosis and diverticulitis are relatively common afflictions of those beyond middle age. They have received less attention from the medical profession than they deserve. Diverticulitis of the colon and its complications have assumed greater importance with the increasing span of life. It is generally accepted that the vast majority suffering from this disease are over the age of forty. That segment of our population is increasing yearly, and it is safe to predict that this disease process will have to be dealt with even more in the future than at present. The purpose of this paper is to point out the trend in the method of handling these patients which has been developing largely over the last 15 years.

Diverticula of the large bowel are outpouchings or herniations of the mucous membrane through the muscularis of the colon; hence, a diverticulum is simply a sac consisting of mucosa and serosa. They usually occur near the taenia where the blood vessels enter the gut. Diverticulosis of the colon occurs in from 5 to 20% of all individuals over the age of 40 years. In

about 50% the sigmoid will be the sole site of diverticula and, in combination with other segments of the colon, the sigmoid will be involved in over 90%. Of all the cases of diverticulosis, from 20 to 25% will suffer bouts of diverticulitis, and at least two-thirds of these will have more than one bout. The sigmoid will be the site of diverticulitis in over 95% of these cases.

Acute localized pain, cramping, muscle guarding, marked tenderness, fever, and leucocytosis may accompany early uncomplicated diverticulitis. Mayo and Blunt reported that the commonest initial complaint was directed to obstruction. Often urinary symptoms will present initially. Bleeding, on which great emphasis used to be placed in the differential diagnosis of carcinoma of the colon and diverticulitis, proves to be not an uncommon symptom of diverticulitis. The value of this sign in discriminating between carcinoma and diverticulitis is nil, but should demand prompt attention to avoid overlooking an undisclosed carcinoma in the slow bleeder and to save the life of the occasional massive bleeder.

It has been stressed throughout the years that the treatment of diverticulitis is medi-

cal, with surgery being reserved strictly for the severer complications of the disease. This is not hard to understand when one considers that the past mortality rate from surgery for this non-malignant disease was 15 to 18% in the best of hands. As late as 1939 we were urged to avoid surgery in this disorder if at all possible.

The common practice has been to treat acute diverticulitis with supportive measures and, as complications arose, to treat them with palliative surgery. Simple drainage of an abscess, with or without a proximal diverting colostomy, was in order. Obstruction was allowed to exist until gastric suction and supportive measures were too thoroughly exhausted and a proximal colostomy was done. After 3 to 12 months the colostomy was customarily closed, only to have recurrence of the distal obstruction or fistula.

This so-called conservative attitude has permeated medical teaching throughout the years, and has resulted in a *laissez-faire* attitude even today which requires reexamination in the light of more recent developments. The greatest single contribution to this subject has been the introduction of chemotherapy and antibiotics. These wonderful therapeutic agents have been promptly and properly directed toward the medical treatment of diverticulitis, greatly reducing morbidity and mortality. Certainly by far the vast majority of these patients can be adequately cared for with these agents, diet, antispasmodics, and good medical regimens. Overlooked, however, has been the fact that these same drugs in *selected* cases make possible cure through accepted surgery. The addition of these agents to the technical improvements in resections of the colon has reduced the mortality to the point that extensive operations on the colon now approach in safety any other major abdominal surgery.

What can be accomplished surgically for these people was brought out as early as 1942, before chemotherapy and antibiotics were available, when Smithwick reported that the ideal in surgical treatment was resection of the diseased colon with end-to-end anastomosis. By means of planned staged operations he was able to produce a curative rate of 84% in those surviving operation. His mortality rate was 17.1%, however. The present-day mortality is probably less than 3%. Most of the recent

writers decry the fact that the excellent experience and good results gained in the surgery of carcinoma of the colon has not been applied to the treatment of diverticulitis.

A review of the literature reveals that authors in the past decade have been urging a more aggressive surgical approach to the problem of chronic recurring diverticulitis.

Attempts have been made to anticipate those cases which may progress into serious complications. Elective surgery, which is now reasonably safe, is being urged in place of prolonged medical management. Complications which require multiple staged procedures and prolonged hospitalization are a great burden to the patient physically, morally, and economically. At present, when staged procedures are used, it is possible to eliminate the 6 to 12 month wait between colostomy and resection in many cases that are treated vigorously with all the weapons at hand. Colostomies may now be closed at the time of resection when care is exercised, thus further eliminating morbidity.

We now believe that non-surgical management is too often prolonged, allowing development of complications which might be avoided. The following are generally accepted as constituting definite indications for surgical intervention when complicating diverticulitis:

1. Free perforations,
2. Abscess formation,
3. Fistula formation,
4. Obstruction,
5. Massive hemorrhage which cannot be controlled otherwise, and
6. Those cases in which carcinoma of the colon cannot be excluded.

To these indications for surgery in diverticulitis, McMillan and Jamieson have added the following which are certainly worthy of note:

1. Diverticulitis not consistently controlled by a good medical program,
2. Diverticulitis in the younger age group,
3. Diverticulitis resulting in severe residual deformity of the sigmoid, demonstrated roentgenologically even though accompanied by minimal symptoms, and
4. Unexplained urinary symptoms which develop in cases of known diverticulitis.

Acute perforation into the peritoneal cavity occurs usually with little warning. Victims of diverticulitis have been seen to

die with perforation following a high soap-suds enema enthusiastically given when a carefully administered warm oil enema could have been safely dispensed. Peritonitis, requiring drainage and colostomy, follows. Some have, on occasions, been able to close perforations primarily, but generally the surrounding tissues are too friable. This is dangerous and omental patches are ineffective. Small, slowly forming, walled off perforations frequently subside on a medical regimen. But even if the first bout is controlled by conservative measures, recurrence and complications are very prone to follow. In those that do not subside promptly, a diverting proximal colostomy may prevent tragedy and will usually permit subsidence of the inflammatory process to the point that definitive surgery may then be done. A localized abscess may empty itself by perforating back into the sigmoid and eventually resolve. It may produce a communicating fistula with other organs. An abscess which presents fluctuance palpable through the abdominal wall should be drained. Once drained, however, abscesses notoriously continue to drain, often indefinitely.

Obstruction is usually incomplete but may soon approach completeness. If it does not promptly subside with gastric suction and intensive supportive therapy, a proximal colostomy may be a life saving measure and should be done before the condition of the patient becomes irreversible. Certainly 48 to 72 hours without the passage of flatus is an ample period of observation. Beware of changes in vital signs during this period of waiting. An increase in pulse rate at this time may be a particularly ominous sign that the general condition is deteriorating and more aggressive steps must be taken. McMillan and Jamieson advance a rule of thumb that we believe to be true: "One episode of obstruction which subsides should be sufficient indication for resection since the incidence of recurrent obstruction and other complications is high if not treated definitively."

As previously mentioned, fistula formation often follows drainage of an abscess resulting from diverticulitis. Staged operations with a transverse colostomy are usually required, and this should be anticipated from the beginning.

Bleeding in diverticulitis is a controversial subject. It certainly does occur com-

monly but is usually small in amount and easily controlled. In those cases of massive hemorrhage that sometimes occur, the problem may be in localizing the point from which the hemorrhage originates, for areas of diverticulitis may be multiple.

In every case of bleeding from the rectum, it is the difficult duty of the attending physician to rule out the presence of a co-existing carcinoma. Although the relationship between carcinoma and diverticulitis is generally recognized as purely casual, it cannot be too strongly stressed that there are cases in which the two cannot be distinguished even when the surgeon has the lesion in his hands. On suspicion, prompt and wide resection is urged. In those cases where a colostomy has been used initially, the interval between the first and second stages should be reduced to no more than two weeks, if at all possible, when malignancy has not been ruled out.

The surgical management of diverticulitis must be individualized and made to fit the patient and the condition. A variety of procedures are available and the one most suited to the situation must be chosen. All of these should be directed toward the ideal if possible, and that is immediate or ultimate resection of the diseased bowel with reestablishment of the continuity of same end-to-end.

The trend is toward more one-stage resections, but for those in too serious general condition for major surgery or those in whom the colon is not prepared, other measures are available. The trend is away from cecostomy in favor of a right transverse colostomy. Exteriorizing procedures are finding less favor, but certainly exteriorization of a freely leaking perforated diverticulum may be life saving. All of these should be directed toward resection of the diseased bowel or they are palliative in nature.

Four cases are reported.

REPORT OF CASES

Case 1: Mrs. J. W. A., age 41, was first seen on September 28, 1951 complaining of vague abdominal pain, with mild bouts of nausea and vomiting and obstipation. On October 8, 1951 a barium enema was done. The barium filled the colon, revealing evidence of obstruction at the junction of the sigmoid and the rectum. Several diverticula on the spot film suggested the possi-

bility of diverticulitis. However, the radiologist stated that malignancy was still a possibility. Four days later, after the evacuation films were taken, the radiologist reported that in his opinion this constriction was due to diverticulitis. She was sigmoidoscoped at this time, and at about 14 cm. a constricted or kinked area was encountered. She was followed over the next six months very closely. During this period of time she complained only of her bowels being very obstinate. She had no pain. Her bowels would not move, in spite of mineral oil in copious doses. She frequently resorted to enemas. By January 7, 1952 her bowels were functioning well. Barium passed the obstructed point more easily when a barium colon enema was made. From this point on, until May 22, 1952, constipation increased in severity. By April 22 a barium enema revealed almost complete obstruction. The radiologist was able to force the barium by this point with great difficulty and he seriously questioned the presence of carcinoma. With these two indications before us, she was admitted to the Jefferson Hospital on April 29, 1952 and, following preparation of her bowel, a wide resection of the involved colon was performed. There was great redundancy of the colon and fully 25 cm. were resected, and in the end anastomosis was done using the open technique. The pathological report was benign diverticulitis. Her postoperative course was unremarkable. She has been examined by means of barium colon enema and proctoscopy as late as February 1955 and has done well in the interim.

Case 2: Mr. C. K. C., white, male, age 49, was admitted to the Jefferson Hospital on August 31, 1948 with a history of low abdominal cramping pain of four days duration and constipation for the same period. On examination he revealed moderate distention of the abdomen, with tenderness and rebound in the right lower quadrant. Rectal examination was negative. Proctoscopy on September 2, 1949 revealed a granular lesion at about 19 cm. The entire field was edematous and fixed. Biopsy was reported as inflammatory reaction with no evidence of carcinoma. Barium enema revealed marked spasm in the region of the sigmoid where several diverticula were noted. He was discharged on September 9, 1948, symptom free, on a low residue diet and sulfasuxidine. He failed to keep his

appointments in the office and was not seen again until August of 1949. On August 30, 1949 he was readmitted to the hospital with cramping abdominal pain and distention. On September 2, 1953 a right transverse colostomy was done. On September 19, 1953 biopsies taken by means of sigmoidoscope revealed adenocarcinoma. On September 22, 1953 an abdominoperineal resection, with removal of a segment of the right ureter and a portion of the bladder, was done. Pathological examination revealed no evidence of malignancy in the first 12 sections that were cut. Only on the 13th section in one small area were seen cells diagnostic of adenocarcinoma of a very low grade. Following a very stormy postoperative course involving his urinary tract, the patient recovered and has done well to date.

Case 3: Mr. J. M. A., white, male, age 63, was admitted to the Jefferson Hospital on November 28, 1949 with a history of passage of dark and bright red blood for the past four days. He had no abdominal cramping or discomfort. Examination of the abdomen revealed only increased peristalsis. A G. I. series six months prior to admission had revealed multiple diverticula of the colon, involving every segment of this bowel. On admission it was felt that he was suffering from massive hemorrhage secondary to diverticulosis and accordingly he was placed on conservative treatment, consisting of rest, sedation, intubation, and parenteral fluids. He was maintained on this program for three days, during which time he received repeated transfusions. He continued to bleed and on the fourth day, in desperation, a laparotomy was performed. Due to the extensive disease process it was impossible to localize the bleeding point and an ileostomy was carried out. The bleeding ceased following the operation but the patient tolerated the ileostomy poorly. He had profuse diarrhea and grew progressively weaker. An ileocecostomy was then rather hastily performed. He has had no bleeding since that time.

Case 4: Mr. E. E. T., white, male, age 43, was admitted to Jefferson Hospital on November 10, 1948. It is interesting to note that on admission he was thought to be a urological problem. He had low abdominal pain, burning on urination, and thought that he was passing blood in his urine. Urological studies were essentially negative, how-

ever. During the day his abdomen became more distended, he developed marked tenderness, and rebound over the lower abdomen. No masses were palpable. He also suffered from nausea and vomiting. The following day a pelvic abscess was drained through bilateral McBurney incisions. His postoperative course was stormy but he gradually improved and was discharged on the 18th postoperative day. It was noted that on the 14th postoperative day he developed a profuse diarrhea which was controlled with difficulty. He was readmitted five days later, on December 4, 1948, because of recurrence of the diarrhea and copious purulent drainage from the left lower quadrant wound. The symptoms subsided rapidly on conservative treatment but ten days after admission a barium colon enema revealed that, in addition to the extensive diverticulitis of sigmoid and descending colon, an enterosigmoid fistula was present. He was readmitted as an emergency on March 31, 1952 with intestinal obstruction due to adhesions. Surgery performed that same day was for relief from adhesions and closure of an enterocolic fistula. He was discharged on April 26, 1952, apparently in good condition. He was readmitted on May 12, 1952 with pain in the left lower quadrant associated with a palpable mass. This subsided under conservative therapy and he was discharged again on May 22, 1952. Four days later on May 26, 1952 he was again readmitted with intestinal obstruction and again an operation was performed for detachment of adhesions and closure of fistula. He was discharged on June 14, 1952 only to be readmitted on July 25, 1952, again with intestinal obstruction. This time it was necessary to resect the terminal ileum. To date no definite surgery has been performed on him and he continues to have bouts of low abdominal pain and diarrhea.

COMMENT

Case 1 is an example of the more aggressive approach being urged today. This woman was subjected to resection. She has done well since and there is cause to believe that she will continue to do well. Contrast this to Case 4 in which no definitive surgery was done. What morbidity might have been saved him had a colostomy been performed at the time of his initial drainage procedure and plans made for resection of the involved sigmoid when the process had

become quiescent! Case 2 demonstrates dramatically the ease with which a co-existing carcinoma may be overlooked in cases of diverticulitis. This man would have fared much better had his colon been resected following the first bout of obstruction according to the present day concept of treatment of diverticulitis. Case 3 reveals that hemorrhage with diverticulitis can be a problem which taxes one's ingenuity.

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ENCEPHALITIS COMPLICATING MEASLES

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During the past two decades many chemotherapeutic and antibiotic agents have been used for the treatment of measles. These agents have greatly modified the complications of this disease. Textbooks written two to three decades ago mention numerous bacterial complications such as pneumonia, empyema, otitis media, tracheitis and bronchitis. Many did not mention encephalitis, which is now the most severe complication. Antibacterial agents have been very disappointing in reducing the serious ill effects of the encephalitic complications. Gamma globulin permits modification of measles and greatly reduces the incidence of all types of complications. Encephalitis rarely occurs following measles modified by gamma globulin.¹ Some workers feel that large doses of gamma globulin given early in the acute phase of encephalitis favorably influence the outcome.² Others find it to be of no value.³

For the past 5 years the reported incidence of measles in Jefferson County, Alabama, was 4,427 cases.⁴ During this interval there were 20 patients admitted to Children's and University Hospitals with encephalitis complicating measles. Since these are the only two hospitals in this area admitting contagious patients, it can be assumed that the incidence of this complication in this area is approximately 4.5 cases per 1000 cases of measles. It is the purpose of this paper to review the records of these patients and to analyze briefly the onset, major symptoms and physical findings, outcome and type of therapy.

From the pediatric service of Children's and University Hospitals.

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Onset and Symptoms: In Table I the major symptoms, physical findings, and outcome of each patient are listed. Half of the patients appeared to have recovered from measles and had an afebrile period of from one to three days before the onset of encephalitic symptoms. In some instances the measles rash appeared to be fading when elevated temperature, irritability, or gastric upset signaled the onset of complications. In seven instances the onset was explosive and was initiated by a generalized convulsion.

One half of the patients had definite evidence of dehydration at the time of admission. All those having bulbar symptoms during the course of illness had been admitted with evidence of dehydration. Twelve patients had convulsions or muscular twitchings or both during the course of their illness. Further evidence of the severity of this complication in this group of patients is shown by the fact that all but two were comatose sometime during their illness. The duration of coma varied from one to 40 days with an average of 9.5 days.

One (Case XI) of the two patients who died had repeated convulsions and high temperature until the time of her death five days after admission. The other (Case IX) was dehydrated and comatose at the time of admission. This patient had bulbar symptoms on many occasions. Repeated suction of oropharyngeal secretions was necessary. She also had many tonic convulsive seizures. Terminally, findings compatible with pneumonia were present. Autopsies were not permitted in either case.

Laboratory Findings: The results of the spinal fluid examinations and the white blood counts are listed in Table II. There is no correlation between the laboratory studies and the clinical condition of the patient; however, the spinal fluid studies are often necessary to differentiate the disease from meningitis. One patient (Case VI) remained in coma for 19 days with normal laboratory findings.

Therapy: The type of therapy obviously varied with the severity of the individual case. All but four patients received antibiotics. These four recovered even though

TABLE I
RELATIONSHIP OF ONSET, CLINICAL FINDINGS, AND OUTCOME

Case	Color Sex Age Yrs.	Afebrile Period Days	Onset	Days of Coma	Convulsions Muscular Twitching	Bulbar Signs	Recovery
I	W M 7	0	Vomiting, fever, cough, irritability, dehydration	40	Yes	Yes	Gait disturb- ance, mental retardation
II	W M 7	3	Tremor, fever, convulsion, dehydration	20	Yes	No	Mental retarda- tion, spastic extremity
III	W F 2	0	Fever, coughing	2	No	No	Complete
IV	W M 11	1	Convulsion	2	Yes	No	Complete
V	W M 11/12	0	Anorexia, diarrhea, dehydration	2	No	Yes	Complete
VI	W F 3	0	Fever, syncope	19	Yes	No	Complete
VII	W F 7	2	Convulsion	2	Yes	No	Complete
VIII	W F 11/12	3	Anorexia, fever, vomiting, dehydration	3	No	No	Complete
IX	W M 6	3	Vomiting, fever, irreg. respiration, dehydration	14	Yes	Yes	Died 14th day
X	W M 6	3	Convulsion	4	Yes	No	Mental retardation
XI	W F 4	0	Convulsion, temp. 106, dehydration	5	Yes	Yes	Died 5th day
XII	W F 5	2	Fever, neck pain, irritability, dehydration	26	Yes	Yes	Complete
XIII	C M 2	0	Vomiting, fever, irritability, dehydration	1	No	No	Complete
XIV	W F 6	3	Vomiting, coma, fever	2	No	No	Complete
XV	C F 11	2	Convulsion, irrational	2	Yes	No	Complete
XVI	W F 9	6	Vomiting, gait disturbance	0	No	No	Complete
XVII	C F 5	0	Convulsion, fever	3	Yes	No	Mental retardation
XVIII	C F 8	0	Vomiting, coma	4	No	No	Complete
XIX	C F 7	0	Fever, vomiting, dehydration	20	Yes	No	Spastic, right extremity
XX	C M 6	0	Unable to walk, vomiting, irra- tional, dehydration	0	No	No	Complete

TABLE II
LABORATORY FINDINGS

Case	Blood		Spinal Fluid		
	White Blood Count	Per Cent Neutrophils	Cell Count	Per Cent Neutrophils	Protein Mg. Per Cent
I	13,050	90	109	0	50
II	5,950	61	59	4	53
III	4,600	70	50	60	11
IV	8,900	70	9	30	25
V	6,900	54	5	0	3
VI	5,150	60	0	0	27
VII	5,850	62	0	0	20
VIII	8,550	54	1	100	4
IX	15,200	84	159	96	63
X	10,350	56	24	10	9
XI	6,900	55			
XII	13,400	85	128	12	69
XIII	4,950	60	275	0	20
XIV	13,000	68	38	0	58
XV	12,800	75	48	0	126
XVI	13,080	50	2	0	22
XVII	23,750	76	110	18	
XVIII	10,500	81	182	65	38
XIX	10,350	79	90	20	25
XX	9,400	64	88	50	

one (Case VI) was comatose for 19 days. The latter received immune globulin and transfusions. Sixteen patients received oral, rectal or parenteral sedation. The two patients who died had moderate amounts of sedation, but the amount was never enough to control the convulsions.

Parenteral fluids were administered to those patients with evidence of dehydration. Adequate nourishment with vitamin supplements was maintained with tube feedings in the patients comatose longer than two days. Three patients received blood transfusions and four received large doses of gamma globulin early in the course of the encephalitis. Three of the patients receiving gamma globulin made complete recoveries even though two were comatose for 19 and 26 days, respectively. The fourth one was comatose for 20 days and has definite sequelae.

Oxygen and various types of supportive therapy were used as indicated. The extremities of patients in prolonged coma were exercised regularly to prevent contractures.

Outcome: Two patients in this group died, giving a mortality rate of 10 per cent. Five patients who recovered have definite physical and mental sequelae as listed in Table I. Others had sequelae of milder de-

grees but gradually improved and were considered normal at subsequent examinations. Eight patients whose period of coma lasted 2 or less days made complete recoveries.

SUMMARY

Twenty examples of measles encephalitis have been admitted to Children's and University Hospitals during the past 5 years. The mortality rate of this group was 10 per cent. The recovery rate was 65 per cent. Five patients who recovered have sequelae. The major symptoms and findings were fever, convulsions, muscular twitchings, coma, irritability, stiffness of neck and dehydration. The laboratory findings are of value in differentiating other diseases, but are not diagnostic and may be entirely normal.

CONCLUSIONS

There seemed to be no relationship between the mode of onset, severity of initial or subsequent symptoms, and the ultimate outcome. One should exercise caution in giving a prognosis of even the most severely ill patient as it is impossible to predict the ultimate outcome. The type of therapy varied and assessment of therapeutic results is difficult. In general, one can state that antibiotics should be used to control bacterial complications. Gamma globulin given near the onset of encephalitis in the pa-

tients mentioned did not seem to alter the disease. One important therapeutic factor seems to be adequate sedation to maintain relaxation and to prevent convulsions. Postural drainage can be used advantageously to remove secretions from the respiratory tract.

In one's enthusiasm to use various drugs, one should remember that there is no substitute for good nursing care and the maintenance of proper nutrition, especially during long periods of coma.

Legislative Study Conference Held—A Study Conference called by the American Medical Association to consider methods of informing its membership of certain aspects of pending legislation was held in Chicago, October 22. More than 100 representatives of constituent state medical associations, AMA officers and members of the Board of Trustees participated in discussions and considered approaches for focusing the public's attention upon the AMA's viewpoint.

H. R. 7225, known as the Social Security Amendments of 1955, includes provision for the payment of monthly cash benefits to the permanently and totally disabled at age 50. The bill, passed by the House of Representatives last summer, will come before the Senate Finance Committee for public hearings early in the next session of Congress.

Comments of participants were solicited at the Chicago meeting and AMA officers and trustees are currently studying these opinions. Dr. George F. Lull, AMA Secretary and General Manager, urged that all medical society representatives who attended the conference send further comments, suggestions or criticisms to AMA headquarters. He pointed out that the Association is studying the consensus of the state representatives who attended the conference and will proceed in a manner consistent with the views of the majority.

Giving the official address of welcome at the conference, Dr. Gunnar Gundersen, chairman of the Board of Trustees, said:

"Our great aim should be to join with other groups and organizations, with the press and other communications' media and with responsible leaders of both political parties to separate Social Security and politics. The AMA believes that problems of Social Security should be solved on the basis of sound judgment, an objective analysis of facts, a humane attitude toward human suffering—and not on the basis of political expediency."

Dr. Elmer Hess, AMA president, emphasized that the program to promote a better Social Security system must be considered a "long range effort," looking forward to 1958, 1960, even to 1962. He also stressed that study of social security legislation will require close cooperation and mutual activity at the national and local levels.

Rauwolfia Sometimes Has Reverse Effect—A drug which has been used extensively to treat mental illness may sometimes have a reverse effect—causing depression and anxiety—when given in large doses for high blood pressure.

Rauwolfia serpentina (Raudixin) and its derivative, reserpine (Serpasil or Serpine), apparently "trigger" mental difficulties in "somewhat unstable" individuals. Yet these "snake-root" drugs have been successful in mental illness because of their tranquilizing effects.

Since the drugs are "quite useful" in treating high blood pressure, and since other side-effects are not serious, it would be worthwhile if some way could be found to recognize those patients who might become depressed when given the drugs, three physicians concluded.

Drs. Richard W. Achor, Norbert O. Hanson and Ray W. Gifford, Jr., Rochester, Minn., reported in the October 29 Journal of the American Medical Association that 10 of 58 patients developed emotional upsets when given either Rauwolfia or reserpine.

The mildest form consisted of increased tenseness, restlessness, insomnia and a feeling of being very uncomfortable. Three experienced "a truly major depression," while three others were moderately depressed and four had mild but definite depressive episodes.

In another group of 70 patients followed by the Rochester physicians 15 patients developed depressive states after several months of treatment with the drug.

Two other reports in the A. M. A. Journal also tell of patients who became depressed while taking the drugs for essential hypertension.

Drs. John C. Muller, William W. Pryor, James E. Gibbons and Edward S. Orgain of Durham, N. C., told of seven patients (from a group of 93) who became mentally ill and were hospitalized.

Their symptoms included insomnia, inability to concentrate, despondency, feelings of anxiety, and apprehension. Two improved with a simple routine of rest, reassurance and encouragement, while the other five required electric shock therapy.

None of the seven was mentally ill at the beginning of treatment, but five gave histories of previous psychiatric illness, they said.

Two St. Louis physicians, Drs. Henry A. Schroeder and H. Mitchell Perry, Jr., reported the development of psychoses in five individuals. None had a history of mental illness, and all five recovered completely after withdrawal of the drug. Nervousness, insomnia and agitation appeared in other patients, they said.

NEXT ANNUAL MEETING
BIRMINGHAM
APRIL 19, 20, 21, 1956

Hypnotism Suggested for Some Childbirths—

While hypnotism will never replace chemical anesthetics in childbirth, it is proving "a powerful ally" in reducing fear, pain and other difficulties, according to a Chicago physician.

During the past decade it has received increasing recognition by surgeons, physicians, dentists and clinical psychologists as they attempt to build "a new science from the foundation of an ancient art," Dr. Sol T. DeLee said.

Dr. DeLee, attending physician at the Chicago Maternity Center, outlined advantages and disadvantages of hypnotism in pregnancy and labor in the October 22 Journal of the American Medical Association.

No longer "shrouded in mysticism," hypnotism is considered an established psychological aid. It is a method of inducing relaxation, during which susceptibility to suggestion is increased, he said. Under hypnosis a person may accept an idea uncritically, which enables him to behave in the sought-for way.

With hypnosis, he said, a woman is likely to have a more pleasant pregnancy because she accepts the suggestion that she will feel little or no pain. Hypnotism may create a better mother-child relationship because the mother has the sensations of childbirth but no pain or unpleasant memories, he said.

Elimination of pain decreases shock and speeds recovery, he said. Amnesia for part or all of the labor and delivery also can be achieved if the patient wishes.

Under hypnosis the patient cooperates more fully than under chemical anesthesia, which frequently interferes with the normal mechanism of labor, Dr. DeLee said. There are no undesirable after effects from hypnosis as with most anesthetic agents. It is also useful for persons allergic to other anesthetic agents.

However, hypnosis can be induced in only about one out of four patients and even in these it may not be complete, the author said. Whether it can be induced is mainly up to the patient. She must want to be hypnotized, must be susceptible to suggestion, and must achieve a harmonious relationship with her physician.

One of the major disadvantages is that it is time-consuming. The pregnant woman must be hypnotized a number of times during her pregnancy so she will be prepared to respond properly to suggestions during labor and delivery.

Until its value is more fully understood and accepted, hypnotism is best used by the physician only at the patient's request, he said.

If one were to use as criteria the amount of life spoiled by disease, instead of measuring only that destroyed by death; or the number of days lost from pleasure and work because of so-called minor ailments; or merely the sums paid for drugs, hospitals, and doctors' bills, the toll exacted by microbial pathogens would seem very large indeed. Microbial diseases have not been conquered. Rather, scientists have resigned themselves to the belief that a relative protection against them can be had only at the cost of a huge ransom.—*Rene J. Dubos, Ph. D., J. A. M. A., April 23, 1955.*

Cirrhosis Reported in Children—Cirrhosis of the liver—a condition commonly associated with alcoholism in adults—occurs more frequently in children than is generally thought, according to three Boston physicians.

However, cirrhosis—the progressive destruction of liver cells—is quite different in children than in adults.

The most common adult form is caused by alcoholism and its resulting nutritional disturbances, while the childhood forms in the United States are usually caused by a liver infection or by malformation of the liver and its parts which exists at birth.

The physicians reported 98 cases of cirrhosis of the liver seen at Children's Medical Center, Boston, between 1924 and 1953. Sixty-one were caused by obstructions and deformities of the liver, while 30 were associated with hepatitis. Seven resulted from miscellaneous causes, including heart, blood and bile duct disorders.

The frequency of cirrhosis associated with hepatitis is "surprising and important," the physicians said, suggesting that hepatitis is not entirely harmless among children. It emphasizes the need for recognizing mild cases of hepatitis without jaundice and the careful follow-up of known cases after signs and symptoms have disappeared, they said.

They noted hypothetically that hepatitis in infants may be acquired before birth from mothers who have been infected through blood transfusions but show no symptoms themselves.

The Boston cases of cirrhosis differ greatly from those of children in India, Africa and the West Indies, where the disease apparently is caused by nutritional deficiencies, they said. None of the American children were suffering from protein or vitamin lack.

The symptoms of the disease and the changes in the liver vary with the different forms of cirrhosis. No signs of the common "alcoholic" cirrhosis appeared in the children. Instead of becoming damaged and replaced by fibrous tissue over a long period of years as in the common adult form, the child's liver either degenerates rapidly or makes a quick recovery, they said.

The report in the September American Journal of Diseases of Children, published by the American Medical Association, was made by Drs. John M. Craig, Sydney S. Gellis and David Yi-Yung Hsia of the departments of pathology and pediatrics at Harvard Medical School and the Children's Medical Center.

Nail Polish Sealer Used for Fungal Infection—

A Miami physician has outdone the proverbial female who fixes everything with a hairpin or a little nail polish.

Dr. Hollis F. Garrard said in the October Archives of Dermatology that he has successfully used nail polish sealer in treating a fungal infection of the fingers and nails.

He said the sealer acts as an "artificial cuticle" and keeps water and foreign material from getting under the loose skin around the nail. The sealer is applied to the nail and nail fold in the morning and left on until bedtime when it is removed and another medication applied.

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THE MONTH IN WASHINGTON

Within a few months there will be under way the first comprehensive survey ever to be made of the nation's mental health problems. The study will attempt to measure the extent of mental illness, to judge the progress and lack of progress in research, and to estimate the additional hospitals and clinics and trained personnel needed before a start can be made toward a solution.

A newly-formed Joint Commission on Mental Illness and Health already has begun preliminary work on the survey. The all-out effort will be initiated—possibly before the first of the year—after the Commission has received the formal approval of the National Mental Health Advisory Council of the U. S. Public Health Service and the Surgeon General. Once this endorsement has been given, \$250,000 in U. S. funds will be available to help with the first year's operations. Another million dollars is to be supplied over the following two years.

Originally, the Joint Commission was formed by the American Medical Association's Council on Mental Health and the American Psychiatric Association. Later other associations joined in, including the American Association of Psychiatric Social Workers, the American Hospital Association, the American Nurses Association, the National League of Nursing, the American Psychological Association and the National Education Association.

A nationwide survey has been the objective of these associations for more than a year. Substance was added to the idea this year when Congress approved the \$1,250,000 fund, to be used over three years, for a comprehensive study. The law specifies that the investigation be conducted by non-governmental bodies; to fully qualify, the Joint Commission has been legally incorporated.

At hearings before Congressional committees early this year psychiatrists and others outlined the complex problem they are facing.

The care of mental patients is one of the great financial burdens of the states; rate of cure and rehabilitation is so low that institutions are being filled as fast as they can be constructed; half the hospital beds are occupied by mental patients and their

care costs more than a billion dollars a year in tax funds.

There are not enough psychiatrists trained to administer state programs or even all the large hospitals; competition for the top men in this field has been compared to the proselyting of football players and coaches.

Many of the leading psychiatrists complain that too much attention is being paid to constructing hospitals and not enough to research, which might develop treatments that would keep many patients out of institutions, and bring about the rehabilitation of hundreds of thousands of others now hospitalized.

In testifying before a House committee early this year, Dr. Leo H. Bartemeier, representing the AMA, argued for federal help in conducting the survey. He told the Committee: "For several years we in the profession of psychiatry have been aware of the critical need for a survey and evaluation of our facilities and programs for the diagnosis, treatment and care of the mentally ill and retarded. While the problems of mental illness appear to grow in almost geometric proportion, we find ourselves without a comprehensive, up-to-date, integrated body of knowledge in spite of the fact that many worthwhile surveys and studies in this field have been made. It is only with such complete knowledge that our present and future direction and programs can be properly planned."

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The nineteenth annual meeting of The New Orleans Graduate Medical Assembly will be held February 27, 28, 29 and March 1, headquarters at the Municipal Auditorium.

Eighteen outstanding guest speakers will participate and their presentations will be of interest to both specialists and general practitioners. The program will include fifty-four informative discussions on many topics of current medical interest, in addition to clinicopathologic conferences, symposia, color television, medical motion pictures, round-table luncheons and technical exhibits.

The Assembly has planned another interesting postclinical tour to follow the 1956 meeting in New Orleans. On Friday, March

2, a party composed of doctors and their families will leave New Orleans for the West Indies and Central America via plane. The itinerary includes Puerto Rico, St. Thomas, Haiti, Jamaica, Panama, and Guatemala, and arrangements have been made for medical programs in the places visited. The party will arrive in Guatemala City on March 22 and an optional extension to the fascinating highlands of Guatemala has been arranged for.

Details of the New Orleans meeting and the postclinical tour are available at the office of the Assembly, Room 103, 1430 Tulane Avenue, New Orleans 12, Louisiana.

PUBLIC HEALTH LEADERS TO EVALUATE EXPERIENCE WITH SALK POLIO VACCINE

Evaluation of practical experience with the Salk polio vaccine by key figures in its development will be a feature of the 83rd annual meeting of the American Public Health Association and meetings of 40 related organizations in the Kansas City, Missouri, Municipal Auditorium, November 14-18.

Participants in a panel discussion on Thursday afternoon, November 17, will include Dr. Jonas E. Salk, University of Pittsburgh, who developed the vaccine; Dr. Thomas Francis, Jr., University of Michigan, who directed evaluation of field tests which led to its adoption; Dr. Leonard A. Scheele, Surgeon General, U. S. Public Health Service; Dr. Hart E. Van Riper, Medical Director, National Foundation for Infantile Paralysis, and Dr. Robert E. DeFries, University of Toronto. The moderator will be Dr. Malcolm E. Merrill, Director of Public Health, Berkeley, California.

Dr. Herman E. Hilleboe, New York State Commissioner of Health and president of the American Public Health Association, will preside at the special session on polio, one of 75 scientific sessions scheduled. More than 5,000 professional public health practitioners from governmental agencies and private health organizations, both here and abroad, are expected to attend, according to Dr. Reginald M. Atwater, executive secretary of the Association. The overall theme of the meeting is "Where are we going in public health?"

In all, more than 400 scientific papers will be presented on public health topics ranging from prevention of home accidents

caused by the do-it-yourself trend, through how to operate a fleet of cars at 3¢ a mile, to combatting cancer, tuberculosis, smog and radiation fall out. Members of various professions within public health—physicians, nurses, dentists, veterinarians, engineers, sanitarians, statisticians, nutritionists, entomologists, biologists, health educators and others—will share latest findings in their fields.

Among topics to be emphasized are mental health, neighborhood planning, new approaches to chronic diseases, and experience with various medical care plans.

General sessions are scheduled for presentation of the highest awards in public health, the Albert D. Lasker Awards of the American Public Health Association and the Sedgwick Memorial Medal.

The American Public Health Association is the largest professional organization of public health workers in the world, with more than 15,000 members throughout the Western Hemisphere.

ALCOHOL AND MUSIC EASE NOSE SURGERY STRAIN

The feeling of well-being which alcohol produces in some drinkers, short of inebriation, and the soothing effect of soft music are being put to good use in nose surgery.

"Young adolescents respond dramatically to the administration of alcohol, which helps make the surgical procedure possible with local anesthesia," said a report in a recent issue of the *Journal of the International College of Surgeons*.

"In elderly persons and those with other illnesses the surgical episode becomes an experience without strain."

The report was made by Drs. Maurice H. Cottle, George F. Fischer and Roland M. Loring, of the department of otolaryngology, Illinois Masonic Hospital, Chicago.

They told of the favorable results of a drip, intravenous administration of a solution of 5 per cent alcohol, mixed with 5 per cent dextrose and vitamins B and C, to 127 patients operated on under local anesthesia. More than 100 of these cases involved plastic procedures. Most of the operations lasted from 1½ to 2½ hours. Ages of the patients ranged from 13 to 70, with an almost even distribution as to sex.

The infusion of alcohol was regulated to prevent the patient from becoming even

mildly inebriated. An excess caused the patient to become irritable and boisterous when surgery began.

Their conclusion of effectiveness was based on the elimination of difficulties encountered frequently in a series of more than 4,000 previous cases in which no alcohol was used.

"Preoperatively, alcohol is of considerable value in allaying nervousness and apprehension," the surgeons reported. "During the operation, it markedly diminishes irritability, especially that produced by the sedatives and hypnotics themselves.

"Postoperatively, it helps relieve restlessness and pain, diminishing the need for narcotics and contributing to the fluid and caloric intake requirements."

After local anesthesia has been effected and the operation proper begun, classical music is played softly to the patient via earphones.

To allay the worries of the patient concerning appearances after a plastic operation on the nose, a polaroid camera photograph is taken before the dressings are applied. This picture is shown to the patient before leaving the operating room.

The surgeons said that alcohol administered by mouth in the form of wines, whiskeys and brandies has been recognized as a useful therapeutic agent in medicine and surgery for many centuries.

"From pre-Biblical times to the Napoleonic era the great epic poems, dramas, stories, novels and historical records are replete with accounts of the dependence of the early physicians and bonesetters and the later military surgeons on alcohol-containing liquids for nourishing and sedating their patients," they said.

"Although alcohol given intravenously has been used intermittently for many years, it has been only during the last decade that substantial and adequate studies have been made for full exploration of its potentialities as an adjunct to the management of the operative patient. Of special interest are the effects on nutrition, fluid intake, respiration, sedation and analgesia."

Alcohol is primarily a depressant of the central nervous system and not a stimulant as it is often thought to be, the Chicago surgeons pointed out. It gives the patient a sense of well-being and reduces anxiety by causing mental sedation and dulling the power of concentration.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

THE KERNEL IS IMPORTANT

W. A. Dozier, Jr.

Director of Public Relations

Clichés, platitudes, old wives tales, old saws, or whatever description you choose to give those terse, catchy sayings founded on a truism may be considered poor thinking and even faulty thinking on occasion. Still, with the human mind being what it is, people find that very often nothing tells the story so clearly or so quickly as those much used, often maligned truisms.

Some casual reading recently brought to attention a portion of a speech made by Mr. Clarence Manion. This portion has been placed in the *Congressional Record*.

"I rode to Chicago on an airplane a short time ago with a very influential man from New York. I gave him this business all the way from La Guardia Field to the Midway Airport. He sat silently, stoically listening and nodding. Finally he began to take notes. I felt encouraged, and gave him more; but when he left the airplane he gave me his notes. He said: 'Manion, watch your blood pressure, my friend.' He said: 'You can't do anything about this despotic trend. The fate of our civilization is in the cards. Here,' he said, 'is the 10-word cycle of civilization. It has happened to everybody; it will happen to us.' The ten words burned themselves into my recollection.

"Do you know them? Ten short words—none of them very sweet.

Civilization begins in 'bondage.' Bondage is word No. 1.

And out of bondage comes 'faith in God,' word No. 2.

And with faith in God comes 'courage,' and it comes from no other place. Courage is word No. 3.

And with courage, men acquire their 'liberty,' No. 4.

And after liberty comes 'abundance,' word No. 5.

And then, after abundance, 'selfishness.'

And after selfishness 'complacency.'

And then after complacency, 'apathy.'

And after a p a t h y 'dependency,' the 'gimme' stage.

And after that, back to bondage again:

Bondage to bondage in 10 fateful steps."

"Where are we on this vicious circle of civilization? Would you hazard a guess? We have passed the point where faith gave us liberty and procured abundance. Are we in the stage of selfishness, or complacency, or apathy, or perhaps even dependency? God save the mark."

Yes, this short passage fits into the same category as does clichés, and very frankly it was used to catch and hold attention as well as to get a point over to the audience. Perhaps one who likes to consider himself sophisticated would consider such below him, but you may rest assured that our sophisticate's attention would be gotten and part of what was said will be remembered.

Now look back at the quotation, and think about it for a minute. Frightening, isn't it? It should be. But is it frightening enough to recall to mind another well-known quotation to the effect that the price of liberty is eternal vigilance? Let us hope that it will make each of us bestir himself to take an active interest and participation in our government—local, state, and national.

Off to Boston—Quaint old Boston with its crooked streets and historic landmarks familiar to every American schoolboy has much to offer physicians and their wives planning to attend the AMA's ninth annual Clinic Meeting November 29 to December 2. An outstanding scientific program covering all phases of medicine—including lectures, round-table discussions, color television and motion picture films—has been lined up for AMA visitors. In the Scientific Exhibit leading authorities from all over the country will be on hand continuously throughout the four-day meeting to answer questions and discuss problems with doctors. The Technical Exhibition will feature the latest developments in equipment, books and pharmaceuticals.

This year's meeting promises to be one of the largest Clinical Sessions on record. Both the Scientific and Technical Exhibits will be held in the Mechanics Building, and the House of Delegates will meet at the Statler Hotel.

STATE DEPARTMENT OF HEALTH

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D. G. Gill, M. D.
State Health Officer

WHAT MEDICAL RESEARCH MEANS TO YOU

Contributed by
Nadine Pitts, Director
Division of Public Health Education

If you were asked to give your impression of research or the research scientist, what would it be like? Would you picture the scientist as a lonely figure, working silently in a deserted barn or cluttered attic? Would you see him struggling with shabby, inadequate equipment, as was the case with some of the knowledge seekers of earlier years—with the Pasteurs and the Jenners of the nineteenth century? If this is your idea of research in the middle twentieth century, then you are mistaken. The lonely scientist's ten dollars worth of wires, glassware and needles has been replaced, in many cases, by a single piece of modern equipment which cost as much as a busy doctor's annual gross income. According to an editorial in a recent issue of *The Journal of the Medical Society of New Jersey*, a new Curie may "flash across the scientific firmament in the future, but the odds are against it. The single, dedicated worker in his basement laboratory has probably gone the way of the one-horse shay, the little black bag and the elegant four-ingredient prescription."

The research world of today, with its streamlined laboratories and its chrome-plated gadgets, is one that most of us rarely see, let alone understand very much about when we do. And yet, everyone of us has a vital stake in this unceasing quest for facts. Especially is this true of the research being conducted in medicine and the allied fields. The title of a recently published Public Affairs Pamphlet points up the real importance of this basic work to all of us. The author, Gilbert Cant, leads off his intriguing narrative with the name *Medical Research May Save Your Life!*

Admittedly, that is quite a claim for medical research, in addition to being an aspect

of the search for knowledge that is new to many people. The fact that scientists are trying to find out how a giraffe's heart manages to keep blood flowing up its long neck may be of only passing interest to you. But undoubtedly you would be a great deal more interested if you thought such a study could result someday in saving human lives. Which is exactly what the scientists hope will be the outcome of their efforts. There is a clue to human heart performance, they believe, in the giraffe's ability to remain in a normal state when it raises its head quickly. The laws of gravity are involved: gravity's effect on human circulation tends to cause jet pilots to "black out."

Our Public Affairs Pamphlet author is not content to make the lifesaving claim for research without proof. He supports his claim with much evidence, and not all of it is gathered from the history of earlier times. He, in fact all of us, have been privileged to witness one of the great medical projects of the ages, and one which is continuing, actually, because the conclusions have not been reached. It is the story of and in back of poliomyelitis vaccine.

The United States and the world knew on April 12, 1955 that, at long last, there was available a potent, tested weapon against the mysterious infectious disease which often cripples its victims, sometimes for life. The weapon was Salk vaccine. The red-colored solution, though powerful, was and is not perfect; the person who is immunized with this agent cannot recline in an easy chair with confidence that it is impossible for him to contract infantile paralysis. Just as other vaccines developed in earlier years were and are not 100 per cent effective in warding off the disease they were designed to prevent, so poliomyelitis vaccine is only partially effective. That is why research work in poliomyelitis is continuing. Scientists are directing their efforts toward making the vaccine more effective than it is at the present time.

A newspaper columnist said recently that wrangling jingoists make the headlines but quiet researchers make the progress. This columnist might have explained why scien-

tific discoveries are not always given much publicity. If there is one word that characterizes research better than any other, it is slow. It has been known for many years, for instance, that poliomyelitis is caused by a virus, an organism which cannot be seen with the naked eye, or even with an ordinary microscope. However, it was less than 10 years ago when scientists discovered that there were, in reality, three kinds of virus which could cause poliomyelitis. And even with these facts in hand, it took years more of detailed technical work, plus hundreds of tests on animals, before a vaccine could be worked out and tested.

Isolated bits of knowledge, then, like the separate parts of a jigsaw puzzle, do not make the headlines, perhaps because they do not have much real meaning for most of us. Thus, we probably would not attach too much importance to the story of the capture of the world's record brown shark reprinted in our daily newspaper. Moreover, we might not bother to turn the page and read further, that this sea animal's liver will be used in cancer research. If we did, we would learn that a substance called squalene occurs in shark livers, and that this agent is reported to have an ameliorating effect on the ability of particular materials to cause cancer. There is much more to the story than these facts, but they are enough to show that the information might be more important than it appears at first glance. No one knows at this point how this particular research project will turn out. But just such seemingly obscure work has often resulted in steering scientists into different approaches, and on to discoveries which can be applied successfully to halt disease processes.

Of the different types of diseases, the infectious group has perhaps yielded most to medical research. Many persons perhaps thought in the early 1930's that medical science had gone almost as far as possible along the road to controlling and preventing these illnesses. Little did we imagine that the painstaking work of scientists would give us the antibiotic drugs. Penicillin and streptomycin, plus other types of drugs—sulfa and isoniazid, or INH—have meant that many infectious diseases have been brought under control to a greater degree than ever before.

If the newspapers of 1928 had related the

events which happened in a London laboratory at about that time, we undoubtedly would not have realized the importance of their occurrence. A British scientist, Dr. Alexander Fleming, left a batch of germs growing in a little dish near an open window. Riding a speck of dust, a bit of fungus flew in the window, settled on the dish and killed some of the germs. This, then, was the discovery of penicillin, among the first of the antibiotic drugs, and the agent which has taken much of the fear out of pneumonia, as well as influenza in an indirect way.

With so many accomplishments in the fight against infectious diseases, medical research has turned more and more to the persistent, long-term illnesses. In fact, this group of ailments can be considered the next great goal of medical science. What causes cancer, or muscular dystrophy? And what can be done to prevent crippling heart disease, mental illness, blindness and rheumatism? These are just a few of the questions research teams hope to answer.

Where does today's medical research take place? It is being carried out in every state of the United States, and in almost if not every country in the world. Local, state and federal agencies initiate medical studies. Perhaps the most fundamental and basic studies are conducted in schools of medicine. Drug manufacturers and private, independent laboratories devote much time and energy to uncovering new scientific facts.

Only a brief review of some of the studies which scientists are conducting will reveal some of the possibilities of their work. In Alabama, the Southern Research Institute at Birmingham is working with cancer chemotherapy. In this age of new drugs it was only natural that someone would ask the question: Aren't there some of them that might cure cancer? There is no definite answer to this query yet but workers at the Southern Research Institute are concentrating on certain drugs that already are known to have some effect, up to a point, on cancer cells. Because this laboratory has learned some important and significant facts during recent years, it is able to continue its work under a grant from the American Cancer Society. And at Alabama Polytechnic Institute in Auburn, a scientist is working with animals, chiefly rats, to determine the relationship between the presence or ab-

sense of a substance called choline and cancer.

Our research tour takes us next to South America. There teams of biologists are probing deep into the jungle in search of the answer to cancer. They are studying the living habits of isolated communities where cancer is unheard of. By American standards the people in these communities are underfed. They often lack even the most elemental medical care; moreover, they live in an environment where poor sanitary conditions prevail. But—they do not have cancer. To find out why, the biologists are checking the water supply, the food, the air and the soil. Somewhere, somehow they hope to find the factor which enables these jungle dwellers to live out their lives without the threat of having cancer.

Back in the United States, we read of a New York cancer center which is trying to discover and develop a sensitive diagnostic test for the early detection of human cancer. Although the diagnosis of many types of cancer is a relatively simple matter, other types grow and spread in the body without giving the victim or the doctor any noticeable advance warning signal. A diagnostic test, then, would be a boon to a greater degree of control of malignant growths such as stomach cancer. The research workers engaged in this project are approaching their job from several different angles. Some of the scientists are searching for an enzyme in the blood which would indicate the presence of cancer anywhere in the body, while another group is testing antibody reactions in the blood of cancer patients that would reveal the presence of early cancer, just as the Wassermann test indicates the presence of syphilis. Still another project of this cancer center is the attempt to develop new instruments that would permit mass screening by automatically detecting cancer cells present in the fluids that can be collected from body openings. If such instruments were perfected, public health agencies would be able to find cancer in large groups of people, just as tuberculosis is detected by mass x-ray surveys today.

No account of research in the United States today would be complete without telling the work being done by the National Institutes of Health. These institutes are the center of research activities in the U. S. Public Health Service. The first of these units

was the National Cancer Institute, created as a result of the National Cancer Act in 1937. Since that time, six other institutes have been added: The National Institutes of Mental Health, Dental Research, Arthritis and Metabolic Diseases, Neurological Diseases and Blindness and the National Heart Institute.

Some of the work of these national public health units was revealed in recent testimony before a Congressional subcommittee. The director of the National Institutes of Health told the group of Congressmen: "We have recently learned to diagnose cancer of the cervix at a very early stage, and this looks as though we are really on the road to conquering this one type of cancer." Another scientist told the same group about the discovery of a substance called glutamine, which is made from beets, that promises an effective control of epilepsy.

Thus, medical research is no longer the work of lone scientists. It is "big business," and, as such, it costs a great deal of money. By the end of 1953, approximately \$18,000,000 had been spent on poliomyelitis research. This huge sum was a part of the more than one billion dimes contributed by the American public over a period of 15 years. Needless to say, the contributors feel that their money was well spent.

The benefit of the scientist's basic research may not be readily apparent. But it is what the advances in medicine and public health practice are made of. The Public Affairs Pamphlet's title claim can safely be rephrased: Medical Research Will Save Your Life!

Polio Virus Test Used in Polio-Like Illness—

The "tissue culture" method by which polio viruses are isolated now can be used to identify one of the unknown or "orphan viruses" found in patients with polio symptoms but with no apparent polio infection.

Two Seattle doctors, Drs. W. M. M. Kirby and C. A. Evans, said that by using this method they found a "high percentage" of polio-diagnosed patients reacted negatively to polio tests, but did have infection with Cocksackie viruses. One of these viruses is believed to cause aseptic meningitis—which has the same symptoms as polio.

This means that it is now possible—and necessary—to test for Cocksackie virus before designating non-polio viruses as "orphans," which is commonly done.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

SPECIMENS EXAMINED

August 1955

Examinations for diphtheria bacilli and Vincent's	536
Agglutination tests	1,077
Typhoid cultures (blood, feces and urine)	730
Brucella cultures	24
Examinations for malaria	168
Examinations for intestinal parasites	3,926
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	25,667
Examinations for gonococci	1,693
Examinations for tubercle bacilli	3,489
Examinations for Negri bodies	95
Water examinations	2,518
Milk and dairy products examinations	5,502
Miscellaneous examinations	711
Total	46,139

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

CURRENT MORBIDITY STATISTICS

1955

	E. E.*		
	July	Aug.	Aug.
Typhoid and paratyphoid fever	5	6	10
Undulant fever	1	2	2
Meningitis	14	9	7
Scarlet fever	19	17	17
Whooping cough	221	151	58
Diphtheria	3	46	16
Tetanus	5	4	4
Tuberculosis	270	269	213
Tularemia	0	0	0
Amebic dysentery	1	0	2
Malaria	0	0	15
Influenza	47	52	23
Smallpox	0	0	0
Measles	172	29	37
Poliomyelitis	35	38	68
Encephalitis	0	1	1
Chickenpox	39	8	5
Typhus fever	0	0	9
Mumps	121	66	30
Cancer	606	473	363
Pellagra	0	0	2
Pneumonia	113	114	98
Syphilis	232	170	527
Chancroid	5	4	9
Gonorrhea	533	399	496
Rabies—Human cases	0	0	0
Positive animal heads	14	19	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR MAY 1955, AND COMPARATIVE DATA

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During May 1955			Rates* (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	5785	3595	2190	21.0	21.8	21.6
Deaths	2202	1350	852	8.0	7.9	8.0
Fetal deaths	170	81	89	28.5	27.5	30.6
Infant deaths—						
under one month	132	71	61	22.8	28.4	27.0
under one year	191	93	98	33.0	38.2	36.2
Causes of Death						
Tuberculosis, 001-019	41	23	18	14.9	13.2	14.5
Syphilis, 020-029	10	3	7	3.6	2.2	3.0
Dysentery, 045-048						0.7
Diphtheria, 055					0.4	0.4
Whooping cough, 056	3	2	1	1.1	0.7	
Meningococcal						
infections, 057	5	1	4	1.8	0.7	0.4
Poliomyelitis, 080, 081	4	4		1.4	1.1	0.4
Measles, 085	1		1	0.4	1.5	
Malignant neoplasms,						
140-205	289	211	78	105.0	102.1	99.5
Diabetes mellitus, 260	23	15	8	8.4	7.0	11.1
Pellagra, 281	1	1		0.4	0.4	0.4
Vascular lesions of						
central nervous						
system, 330-334	289	157	132	105.0	106.6	104.7
Rheumatic fever, 400-402	6	1	5	2.2	1.5	1.5
Diseases of the heart,						
410-443	728	481	247	264.5	253.1	266.5
Hypertension with						
heart disease, 440-443	164	74	90	59.6	57.3	62.4
Diseases of the						
arteries, 450-456	43	28	15	15.6	9.6	13.4
Influenza, 480-483	9	2	7	3.3	5.1	5.2
Pneumonia, all forms,						
490-493	59	27	32	21.4	19.1	21.5
Bronchitis, 500-502	2	2		0.7	1.1	
Appendicitis, 550-553	1	1		0.4	1.1	2.6
Intestinal obstruction						
and hernia, 560, 561, 570	11	5	6	4.0	4.0	3.7
Gastro-enteritis and						
colitis, under 2,						
571.0, 764	6	3	3	2.2	3.3	3.0
Cirrhosis of liver, 581	6	4	2	2.2	4.4	3.0
Diseases of preg-						
nancy and child-						
birth, 640-689	13	7	6	21.8	14.7	11.7
Congenital malforma-						
tions, 750-759	23	17	6	8.4	7.1	5.0
Accidents, total, 800-962	160	100	60	58.1	53.6	54.6
Motor vehicle acci-						
dents, 810-835, 960	72	48	24	26.2	27.9	21.2
All other defined						
causes	388	230	158	141.0	154.3	167.5
Ill-defined and un-						
known causes, 780-793, 795	81	25	56	29.4	23.5	33.4

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

SCHOOL CONFERENCE CONSIDERS HEALTH PROBLEMS

The emergence of the medical profession, education, and public health as a functioning "team" was a major theme of the Fifth National Conference on Physicians and Schools, held at Highland Park, Ill., Oct. 12-14.

More than 200 physicians, public health officials, educators, and representatives of related organizations participated in roundtable discussions at the conference, sponsored biennially by the American Medical Association and its Bureau of Health Education. Thirty-four states and the District of Columbia were represented by the conferees.

Viewpoints of education, public health, medicine and the home were shown at the opening session by Samuel Brownell, Ph. D., commissioner, Office of Education, and Dr. Leonard Scheele, surgeon general, Public Health Service, both of the Department of Health, Education and Welfare; Dr. George F. Lull, secretary and general manager of the A. M. A., and Mrs. Rollin Brown, president, National Congress of Parents and Teachers.

These speakers agreed that more home and community participation and more emphasis on mental health and accident prevention are needed.

Dr. Scheele said at present rates it is estimated that "one out of every 12 children will spend some time in mental institutions. Among children 5-14 years old 40 per cent of all deaths are due to accidents." He said the Department of Health, Education and Welfare wishes to know what specific help the federal agencies can give states and communities. Such programs, he noted, would have to be geared to fit individual localities and situations.

Dr. Lull said that "by every solid measure of health" our youth is healthier than ever before: longer years of life are in store; their chances of living to school age are better than at any previous time; their chances of living through the school years have reached an all time high; youngsters

are bigger and heavier on the average than ever; and gains against disease have been "phenomenal." Except for accidents, which are responsible for more deaths and disabilities among children than the next several causes combined, we have made "excellent progress" on all fronts.

He outlined a five-point program for improving school health, including:

An accident prevention program and procedures to meet emergencies at school; preventive work in mental health; discovery and follow-up of children with health problems; full use of the school's special opportunities for health education, and interpretation of health needs and services to parents and other adults.

Dr. Brownell listed a number of major improvements resulting from cooperation among educators and health specialists, including gains in extent and coverage of health services; better health education programs in preparing teachers; improvement of health texts, films, teacher's guides and other educational material; tremendous changes in standards of lighting, heating, ventilation, acoustics, sanitation and provision of health, athletic and washing facilities; great increases in enrollment of children in health and physical education classes; increased health awareness and education of parents and public; and expanded knowledge of how children grow and learn.

In any community medical and dental services, water supply and waste disposal, restaurant sanitation, adult health education, advertising media and hundreds of other forces all "make their impact on the school child's health—and that of his family and teachers," Dr. Brownell said. "These forces also influence directly or indirectly most of his educational experiences."

He said interrelationships between professional persons and others involved in the school child's health must be "real and vital" if all children are to be best served.

Mrs. Brown described the mushrooming interest of the Parents and Teachers Congress in various aspects of the child's wel-

fare and noted that the entire community is involved in this question.

"Health really is everybody's business," she said. "Programs of any kind will fail unless they have public approval. Like radio and TV, you can always turn off a program if it bores you or propagandizes. But everyone has a real interest in something to which he can devote his own thought, time and energy—even more than his money."

Dr. Elmer Hess, Erie, Pa., president of the A. M. A., told participants that two of their biggest jobs should be in cutting down street and highway accidents, and helping the child with emotional or mental problems.

He said teachers must first discover and then help the child with such difficulties, because some children just "can't take" usual educational methods.

"All children are not created mentally and physically equal," he said. "We must find the one who has problems, spot him early, and guide him if possible" so he is "kept from growing up a disgrace, a menace, or worse still, the forgotten soul in a mental institution."

Three ways Dr. Hess suggested to combat highway accidents were: to encourage auto manufacturers to install safety devices to such an extent that, in an accident, injuries would be reduced to a minimum; insist on law enforcement, including restrictions on too-slow drivers as well as speeding ones; and, "most important," urge that no one be allowed to drive who is not in perfect mental and physical health.

At the formal session closing the conference a new approach to a general report on its activities was used. "Roving reporters" who had visited the various discussion groups gave highlights from each group and then a general "summing up." The reporters, representing the three major fields involved—medicine, public health and education, were Dr. John Miller, Ed. D., superintendent of schools, Great Neck, Long Island; Dr. John Shackelford, Oklahoma state Department of Health; and Dr. John Reichert, American Academy of Pediatrics.

They noted that one of the major feelings of the conference was "an increased respect among the various disciplines for the professional competence and integrity of the others."

Discussing the central theme—a "team approach," they said the function of the interrelated professional groups, working co-operatively, is to help parents in discharging their responsibility in the proper care of their children. The feeling was that the relations between members of the team should be such that any member would feel free to initiate action or propose changes.

A big step forward in the conference, they said, was the spelling out in more detail of areas of responsibility of the members of the team.

They also said the various groups, in their discussions, seemed to be getting into an important concept—that of the "total child."

The child, it appeared to conferees, is not just a physical entity "who shows up in school each day" but a human being with physical, emotional, social and moral aspects which those who deal with children must recognize and guide.

The child also is not just a school child but a member of a family and a community with problems in each area. The team therefore is ideally representative of the entire community of the child's environment.

Some of the highlights of the ten discussion groups and some conclusions drawn by each group follow:

The group discussing "Use of Health Records," under the chairmanship of Dr. A. B. Rosenfield, Minnesota Department of Health, Minneapolis, said there should be cumulative health records on each school child, including teacher observations, history of illness and immunization, and recommendations from the physician. The record could be used as a tool for nurse-teacher conferences and referrals.

This group also urged "an intelligent interchange of information, with the consent of the family, on a professional and confidential basis."

The teacher—who represents the known and familiar—should play the central role in preparation for and handling of disasters at school, according to a group which had as its chairman August Pritzlaff, Chicago Board of Education. Since panic results largely from the unknown, any plan for disaster should require that the teacher remain in control of her pupils.

Preparations involve routine procedures,

psychological adjustment, and cooperation with civil defense, fire authorities, the medical profession and others.

An interesting highlight of the discussion group periods was the appearance of four teen-agers from a nearby school, in the section considering the health aspects of comics, movies and television, directed by Elizabeth Avery, Ph. D., Washington, American Association of Health, Physical Education and Recreation. The four students, who were exceptionally poised and enthusiastic in answering the discussants' questions, seemed to feel that perhaps "the grown-ups" were worrying too much about the problem.

They agreed that if teen-agers have enough interesting and important activities (such as sports, musical groups, student and civic activities) the mass entertainment media will hold only an appropriate place. They admitted that the elementary school level problem is different and that some of the younger boys and girls spend an inordinate amount of time at television or comic books.

The group generally agreed—assuming that accurate studies on the problem are done—that guides for parents could be developed to use in handling their own family situations.

They said the problem is largely one of "too much time spent in sedentary entertainment," regardless of the merits of the TV programs or comic books. However, they suggested that programs for young people might take advantage of opportunities to present information on health and safety.

Joint action by parent groups with the assistance and guidance of the school, public health and medicine is needed to analyze good and bad entertainment and to budget the child's time within a variety of wholesome activities, the group said.

Athletic activities and their emotional aspects were discussed by the group with Dr. George Maksim, District of Columbia Medical Association, as chairman. They suggested that a different approach is needed for children up to 12 and those over 12. In the young group, athletic activities should: (1) be adapted to growth patterns of the individual, (2) encourage maximum participation by breaking big groups up into small ones, (3) involve both coopera-

tion and competition adapted to the age and maturity of the pupils, (4) afford opportunity for the child to succeed, (5) reduce unfavorable emotional responses to a minimum, and (6) recognize the motivations of the pupils.

For the older groups, activities should: (1) help students develop a sense of values, independence and cooperation, (2) recognize characteristics of adolescence, (3) be comprehensive, including individual, group and coeducational activities, (4) reduce unfavorable emotional responses to a minimum, (5) be on an intramural basis in the junior high schools and for girls in the senior high schools, (6) keep exhibitionism at a minimum, (7) be supported by sound administrative practices, and (8) be an integral part of the educational program and be so financed.

The group added a note that motivations of adults planning sports programs for children should be carefully studied.

Another group defined its subject, health counseling, as "the continuous process of helping the pupil and parents to gain insight and understanding into the status of the pupil's mental and emotional health." With Mabel Rugen, Ph. D., of the University of Michigan, as chairman, the group said counseling for healthful living should be available to all students, and should be coordinate with other counseling programs.

Urging that counseling should be available first to those who have apparent need for it but also to those who do not appear to need help, the group commented that "non-recognition of a problem is no guarantee that none exists."

The child as a "totality" was an important consideration of the group discussing personality and behavior problems, with Dr. C. Morley Sellery, Los Angeles City Board of Education, as chairman.

It said such problems have an impact on the "whole child" and on the educational program. The teacher as a "team member" must be broadly educated, especially in child growth and development, so that he may prevent, recognize, and solve problems within his competence. Both parents and prospective parents should be educated to assume their responsibilities, while all groups concerned with emotional health should arrange for the proper professional interchange of information.

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MEDICAL CENTER DEVELOPMENT

J. J. DURRETT, M. D.

Birmingham, Alabama

The state of Alabama has made it an obligation of the University to train health personnel—physicians, dentists, nurses and technicians, among others. It is therefore necessary for the University to strive for a medical center adequate for instruction and experience for all students.

Such a facility for health promotion, care of the sick, investigation and instruction requires the services and the scientific direction of properly trained professional groups and individuals. But the problems of health are not the exclusive business of any profession or group.

Health is big business. And the services of business managers of proven economic and practical competence are as essential to success as are medical scientists.

Health is everybody's business. Consumers of health services must join with scientists and business managers of proven competence to insure the organization and operation of a health center adequate for the needs of all at a cost we can afford.

Business, labor, and the general public, through non-profit organizations, insured groups, local, state, and federal governments, and educational institutions, currently manifest a great and growing interest in the good that comes from the maintenance of health and the restoration of health. These agencies and individuals provide, in the aggregate, enormous support for programs and for facilities seeking to insure

the eventual availability of a complete and more rewarding health experience for everyone. These efforts are not and can not be static, else they fail. A health center must not lag in its use of progress in sociology, business, science and education.

Let us take a realistic look at recent health progress.

It has come to pass—"our years are three score years and ten"—life expectancy at birth in 1955 has reached 70 years, doubling since about 1890!

There is opportunity for improvement but we have already achieved excellent health for the age group under 60.

The complex social changes responsible for our improved health and the rapid lengthening of our span of life are not obvious or fully understood. But we do know that the grinding mental and physical fatigue of long hours of work and poverty have been assuaged and we have time and the means for rest and recreation through the use we make of scientific discoveries, mechanization of production, efficient transportation of goods and persons, and rapid dissemination of information and ideas.

About 50 years ago we began to increase our use of newly devised measures to improve the environment in which we live, finally achieving safe disposal of waste, control of host vector insects, and accurate processing and sanitary handling of drugs, water, milk and other foods. Somewhat later, but roughly parallel to these achievements, health agencies and physicians began to understand and emphasize the benefits to be derived from proper nutrition, from specific personal immunity induced

Read before the Association in annual session, Montgomery, April 22, 1955.

The author is consultant to the President of the University of Alabama for Medical Center Development.

by inoculation, and from the application of improved corrective measures to the problems of maternity and child health. And, finally, we have antibiotics with a wide range of preventive and curative values.

Among the cumulative benefits from these and other achievements is the practical elimination of the evil consequences of many diseases formerly important as causes of morbidity and mortality. This is more fully appreciated when we remember that the communicable diseases of childhood produced death rates 180 times higher in 1910 than now, tuberculosis 25 times higher, and the complications of maternity and child birth 18 times higher. Deaths in persons under age 45 have in 50 years been reduced 65% and mortality and morbidity are shifting to the age group over 65.

Let us now turn from health progress and take a realistic look at our changing health problems and programs to meet these problems.

While it is true our lives have been greatly lengthened and we are much freer from disease until the advent of old age, it is also true that these magnificent achievements confront us with the health problems of our aging population. There are many of our old folks who suffer the loneliness and misery of illness, unemployment, or lack of means to provide their minimum requirements for shelter, clothes, food and health. This is a growing social problem, staggering in its proportions, vital in its import, and requires effective remedies. This group is organizing and voting and their social problems are rapidly coming of age politically.

Twenty-five years ago the depression clearly revealed how great was our lack of effective means to deal with the related difficulties of unemployment, poverty and illness.

The National Recovery Administration, whatever its merits, if any, was created in emergency on a temporary basis primarily to deal with the confusion and poverty of unemployment.

The Social Security Administration was created on a permanent basis to insure against gross lack of financial support after age 65. Successive amendments to this act are gradually bringing all employed persons and their dependents under its provisions.

Compulsory health insurance was proposed but failed of enactment into law. Other approaches to the solution of the stubborn problems of health had to be sought.

Under the conditions of World War II, billions of dollars were spent for scientific research and development. In the health sciences, great progress was made, and toward the end of the war, to insure continued benefits from health research, the purpose of the National Institutes of Health was expanded and subsequent annual authorizations of funds have fostered a steady growth of medical research. In the event legislation pending before the Congress becomes law a more even and equitable distribution to our medical colleges of Federal support for research facilities will become mandatory.

However, many of the important practical problems of illness immediately confronting the medically indigent remain unsolved.

To help relieve the obvious shortage of hospital beds, the Hill-Burton Act became law in 1946. Two years thereafter an amendment to the Vocational Rehabilitation Act provided a more realistic approach to medical rehabilitation of indigents and training of the handicapped, crippled or disabled.

Nationwide experience with the operation of these laws and continuous study of other health problems and procedures have provided a much clearer understanding of the true nature of some of our problems of health and disease. Heretofore, interest and attention have been drawn away from the patient as an individual and have been much too narrowly fixed on specific diseases. Often our remedial measures have been even more restricted and inadequate. This clearer understanding of the ill patient as an individual, often with complex social problems and needs, affords an opportunity for more complete and adequate patient care and a more satisfying therapeutic result. In general, chronic health problems were found to be less well provided for than acute health problems. Accordingly, in 1954 the Hill-Burton Act was amended to provide for the construction of clinics for diagnosis and treatment of ambulatory patients, for facilities for the rehabilitation of the handicapped, crippled and disabled, for hospitals for chronic diseases and for nursing homes. Such facilities are much less

costly to construct and operate than hospitals for the acutely ill and they often best serve the patient's needs. Also the Vocational Rehabilitation Act was extensively changed in 1954 and its provisions broadened. The policies announced by these laws and supported by large monetary grants for the cooperative construction of local facilities establish at least one general direction in which medicine will develop in the immediate future.

Trained personnel—physicians, nurses, practical nurses, nurses' aides and technicians and others—are not available in numbers sufficient to bring these programs into prompt full operation. Therefore, special emphasis is laid on the training of necessary personnel, and priority in the allocation of funds is planned to provide adequate facilities in institutions where such training is possible.

Legislation is pending before the Congress which, if enacted into law, will provide for:

1. Buildings and equipment to encourage chronic disease research;
2. Construction of facilities for medical education and research;
3. The training of practical nurses and auxiliary hospital personnel.
4. Medical care for public assistance recipients;
5. A commission to study the problems of aging and the aged;
6. Support for a study of interrelated problems posed by mental illness and support for teaching and study of mental disease;
7. Substantial scholarships for students who agree to certain conditions of service in the Armed Forces.

There is little doubt of what we have here in established and proposed Federal law. A broad government medical policy is announced with a rapidly forming outline of procedure and support for the rehabilitation and care of the sick, for research and for education. Strong financial support is offered under fund-matching arrangements between Federal, state and local governments or non-profit local organizations or individuals. Autonomy of local operation is provided. However, there is under the stated policy and the conditions of award of grants the necessity of any local participant

going along with the general purposes of the program. The medical center is of necessity a participant.

To satisfy our most urgent needs, the medical center requires, for necessary growth, four additional city blocks adjacent to and west of the present medical center. For this area a slum clearance, low-cost housing project was announced late in 1951. In response to a statement of the obvious future requirements of the medical center these housing plans were revoked and the area will soon be available for purchase by the University from the Birmingham Housing Authority.

We require a clinic for ambulant patients, modern and adequate in every respect to promote health, care for the ambulant sick, and provide clinical instruction for undergraduate and graduate students. It should be constructed and operated jointly, on an equitable basis of cost, by the city of Birmingham, Jefferson County, the state of Alabama, and the University. This ambulant clinic should have:

(1) A complete official health center adequate to supply the health needs of the district adjacent to the medical center and to serve as a facility to thoroughly train all students in public health principles and procedures. This health center should be operated by the Jefferson County Health Department, in cooperation with the State Department of Health and the Department of Preventive Medicine and Public Health of the Medical College.

(2) An area for the handling of emergencies adequate to care for the heavy case load and insure that every student is thoroughly trained to handle any emergency with prompt precision.

(3) A diagnostic and therapeutic center equipped and staffed to study problem cases and administer special treatments requiring expert instrumentation, radiation, special handling or observation during and after treatment, etc. This should be an area of advanced training for undergraduate and graduate students.

(4) An area for rehabilitation and physiotherapy.

(5) Areas for all departments adequate for their routine handling, diagnosing and treating of ambulant patients.

(6) A fully equipped, suitably located

classroom for 150 students, and smaller rooms for conferences on each floor.

(7) A modern system of originating, completing and handling of records.

(8) An air suction transportation system for small objects—records, specimens, reports, etc.

(9) Particular attention to the transportation of supplies and persons.

(10) A traffic tunnel attachment to and a closely coordinated functional relationship with the acute hospital and a new chronic hospital and nursing home to avoid or reduce bed occupancy and high cost.

We require a chronic hospital and nursing home economical to build and operate and suited to the needs of many patients who are convalescing, who have a chronic illness, who are undergoing medical rehabilitation or diagnostic study. This chronic hospital and nursing home should be connected by a tunnel with the ambulant clinic and the acute hospital and their functions should be coordinated.

We require a residence for at least 300 student nurses, with necessary dining and library facilities for these students and for hospital interns and residents. There is imperative need in Alabama for many more trained nurses. The augmented nurse training program which this facility will make possible would greatly improve the care afforded our bed and ambulant patients.

We also require an addition to our library for the Dr. Lawrence Reynolds library of rare medical works which he has given to the Medical College of Alabama. This is indeed a rare acquisition. No similar private collection in this country is superior to it.

We have other material needs. I have referred only to those which are immediate and urgent.

Progress in the basic medical sciences, the promotion of health, and the care of the sick depend upon productive research, careful observations and useful planning. Research experience is a necessary part of scientific teaching and training. It is essential as a stimulant to inquiring minds engaged in the educational process. Under its proper influence, students are teachers and teachers are students. And there is always a chance that something new and useful will come of it. It is an expense charge-

able against resources and the time of the investigator. Research should not be permitted to interfere with other essential programs of a medical center. Neither should those who lack ideas or aptitude for planning research, or are unsuited for the work of research, undertake it.

I have referred to urgent needs for new facilities. We also need additional funds to meet operating costs.

The finances of medical centers too often get out of control. Either there are reliable sources of expendable income for plant building and for operating, or there are not. It is necessary to be realistic about this and get the facts. When expendable income is determined, realism should definitely become the guiding principle in devising a first things first plan of operation. If we do not have adequate support and can not get it, we must limit what we do.

Problems inseparable from personnel are the most important and difficult problems arising in a medical center. Time permits only brief mention of this here. Upon the faculty rests the duty of preparing and executing an effective course of study, continually discarding the old and less useful to make room for the new and more useful. There may be adequate and efficiently arranged bricks and mortar, fixtures, equipment and supplies and funds to meet reasonable operating costs, but if we do not have an able staff, devoted to official duty and willing to make personal sacrifices to insure each patient treated and each student taught a rewarding experience, excellence of achievement will be less than it should be.

Carbohydrate-Free Diet Called Impossible—Sugar in concentrated forms should be removed from the diet of a child with severe tooth decay, but other carbohydrates can't and shouldn't be completely removed.

A physician consultant for the Journal of the American Medical Association was answering a physician who had questioned the advice of some dentists that "all sweets . . . , including fruits and other naturally occurring sugars," must be eliminated from the diet of caries-susceptible children.

The consultant said in the November 26 Journal that it is virtually impossible to eliminate completely all carbohydrates from the diet. He said one mother "actually was in tears" after trying to prepare such a meal.

However, he said, jams, jellies, candy, heavily sugared beverages, canned (sweetened) fruits, and sweetened pastries should be avoided.

CARDIAC ARREST

A SYNOPSIS OF CURRENT LITERATURE

JAMES H. ERWIN, M. D.

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An almost universal interest in the awful condition known clinically as cardiac arrest has become evident in the past few years. Numerous excellent scientific papers have been published as case reports or as summaries of clinical and statistical analysis of this subject. Dale, for example, has listed a bibliography of 119 papers.

As one reviews these reports and analyses, a number of interesting facts stand out. Many of these statements come as a surprise, even to those individuals who have a rather broad knowledge of other aspects of surgery, and many of the statements are rather startling to persons whose contact with those same surgical problems is limited. For this reason I have attempted to summarize a number of these outstanding articles and to elaborate on certain conclusions which they contain.

The number of deaths due to cardiac arrest has steadily increased. Note the ratio change in this condition over a forty-year period as evidenced by reports from various authors.

1:5000	1915	Gurlt
1:2384	Years?	Stephenson
1:1128	1948-1952	Snyder
1:700	1951	West
1:600	1952	West

Numerous attempts to explain this increase have been given. Foremost is the theory that the use of a multiplicity of drugs preceding, during and immediately after surgery makes physiological stability difficult to maintain. This has been staunchly advocated by Dinsmore.

A change in the types of surgical procedures is offered as partly responsible. Bronchoscopies, esophagoscopies, cardiac catheterizations, and angiograms are examples of procedures used with growing frequency today.

The anatomical scope and duration of operations have widened greatly. Surgical attack is frequently made on combined anatomical systems by means of incisions which open more than one body cavity simultaneously.

In addition, a number of predisposing physiological or pharmacological causes of cardiac arrest have been listed by Palomera:

1. Myocardial deficiencies,
2. Hormonal and chemical changes,
3. Hypoxemia,
4. Vago-vagal reflexes and other nervous stimuli,
5. Anemia (hemorrhage),
6. Bacteria and toxins,
7. Anesthetic agents,
8. Barbiturates,
9. Pyrogenic and transfusion reactions,
10. Avitaminosis.

A survey of the clinical background of cardiac arrest brings to light a number of interesting facts. The condition occurs about twice as often in males as in females and is found most frequently in the Mediterranean and darker races. Twenty-one per cent of the cases occurred in children under 10 years of age; if the age limit is increased to 14 years, the percentage is increased to almost 25.

Since 85% of all cases of cardiac arrest occur during surgery, it is well to look for a moment at the type of surgery involved and the time of arrest in relation to the surgery. Stephenson has brought to light a number of facts in these respects in his analysis of 1200 cases. In this group, 32% of the arrests occurred during a procedure of abdominal surgery, almost twice the number occurring during thoracic procedures, if one excludes surgery on the heart itself. Although procedures limited to the ear, nose and throat caused only seven per cent of the total number, they ranked fourth as a causative factor.

Approximately one-third of these arrests occurred during the induction of the patient, one-third during the operation itself, and one-third during the wound closure or in the immediate postoperative period.

Further analysis of 150 cases by Stephenson showed that 76 of these occurred while something was being done to the endotracheal tube. Other important trigger

mechanisms were: working around the lung hilus, contacting or cutting the vagus nerve, downward traction on the stomach, bronchoscopy at the end of a procedure, and the otherwise uncomplicated act of vomiting by the patient.

A brief evaluation of certain of the foregoing data is in order at this point for the sake of emphasis. Although Cole has called attention to the fact that "V. I. P. anesthesia" is to be condemned—and I am sure that we all heartily agree with him, it might be well for the anesthetist to lower his "alarm threshold" a bit when his patient is a dark-skinned male. The point has been made that early or mild cyanosis is more difficult to detect in such persons. In addition to the natural coloration of the skin, the use of darkened or colored surgical drapes is apt to make early detection of cyanosis difficult.

The high incidence of cardiac arrest in children—especially if combined with a relatively high incidence in ear, nose and throat procedures—might well give pause to both surgeon and anesthetist. This is an appropriate time to make a plea for better preoperative psychotherapy and better preoperative sedation in those children coming to the operating room. The sensitizing action of adrenalin released into the blood stream of these frightened children makes them susceptible to the development of cardiac arrhythmias.

In the light of the figures presented above, the abdominal surgeon can no longer view the condition of cardiac arrest with complacency; and the idea, held by many, that cardiac arrest is primarily a problem of the thoracic surgeon must be discarded.

Certainly the time of cardiac arrest in relation to the operation is of the utmost practical significance. At the time of induction of the patient, the surgeon is probably in the scrub room and his contact, if any, with the patient is only visual. At such a time the observation of the patient's physiology is completely under the control of the anesthetist. It is the latter who must be alert for any aberrations in the patient's cardiac activity. Although the responsibility for observation may be shared during the operative procedure, one must guard against any tendency to relax this vigil during the closure or during the immediate postoperative period. During this latter interval the anesthetist may be left with the patient

while completing the oral or tracheal toilet. The significance of this time period mounts when one recalls the significance of the endotracheal tube in the 150 cases noted by Stephenson. The act of suctioning through the tube caused arrest in a number of persons. This fact and its implications are not known or understood by many anesthetists and even by some anesthesiologists.

Certainly the anesthetist plays an important role in detection of cardiac arrest. Editorial attention has been called to the fact that, although the cessation of cardiac activity is reportedly sudden, an alert anesthetist usually describes some premonitory sign, such as a slight change in blood pressure, some alteration of the pulse, a change in respiration, or some degree of cyanosis. Cooley noted a bradycardia of forty per minute frequently occurred before the cardiac arrest. In West's series, 19 of the 30 patients showed some cyanosis prior to the heart failure.

In fact, it is from the anesthetist that the surgeon will usually obtain the criteria for proceeding with the drastic therapy which is necessary in cases of cardiac arrest. If the former announces that there is absence of blood pressure, absence of peripheral pulse, and absence of apical impulse, one is justified in immediate thoracotomy. Lest the word thoracotomy should sound too formidable, it might be better to specify the incision through the anterolateral part of the fourth left interspace. If the incision is started about $1\frac{1}{2}$ or 2 cm. lateral to the sternum, the internal mammary artery is avoided. Both costal cartilages may be severed with the knife. An abdominal retractor may be inserted between the ribs and then turned. This will spread the ribs to allow entrance of hand and wrist into the thorax, and keeps pressure off the surgeon's hand until a rib-spreader may be obtained. It is generally agreed that the chest must be opened and the massage of the quiet heart started within four minutes (preferably three) if any degree of permanent success in resuscitation is to be obtained. Maintenance of an adequate airway is essential and is best done by means of an endotracheal tube. However, a tight fitting anesthetic mask and an oropharyngeal airway will suffice. Positive pressure should be given by the anesthetist. More detailed explanation of entrance into the chest may be found in a number of the articles in the ap-

pended bibliography. The technique is described only briefly here in order to emphasize the point that only two instruments are really needed, a knife and something to separate the ribs until further technical and mechanical aid is obtained.

It is generally agreed that needling the heart prior to thoracotomy and any means of massage other than transthoracic are of no value. The status of drugs injected into the heart is still debatable. Most of the drugs used are not without some danger. Adrenalin may sensitize to further arrhythmia. A case of arrest has been attributed to the intracardiac injection of 200 mg. of procaine amide. Gerbode feels that any materials used will reach the coronary circulation better if injected into the right side of the heart and allowed to pass through the pulmonary system.

The ounce of prevention adage applies strongly to this condition. Certain prophylactic measures have been discussed. There are others which are stressed in part by Palomera:

1. Effective and careful preoperative management.
2. Careful selection of anesthetic agent. West has emphasized the need for caution in the use of sodium pentothal and nitrous oxide.
3. Prophylaxis and treatment of all disturbances of cardiac rhythm.
4. Avoidance of too deep anesthesia.
5. Use of local anesthetics by anesthetist or surgeon to reduce reflex irritability.
6. Prevention of pyrogenic or transfusion reactions.
7. Adequate pulmonary ventilation.
8. Adequate blood volume. Factors 7 and 8 may be interpreted as a sufficient amount of oxygen being passed through unobstructed air passages, both artificial and natural, to reach a blood stream in which the red cells are qualitatively and quantitatively adequate.
9. Avoid "hasty surgeon" attitude. This factor has been emphasized by Blades. Briefly, this means that when the condition of a patient on the operating table becomes alarming, the surgeon should stop the procedure, consult with the anesthetist, find the cause of the trouble and correct it. Such a course is better than that of attempting merely to finish the operation as fast as

possible, i. e., "get him off the table."

10. Close liaison with anesthetist. The anesthetist who can give brief, accurate reports at periodic intervals concerning the patient's progress is invaluable. Bowers advocates a meeting of surgeons and anesthetists on the day prior to all elective surgery to discuss the pending procedures. He feels that this has done a great deal to decrease the number of cardiac arrests among his cases.

SUMMARY

A brief review of current literature concerning cardiac arrest has been presented and the importance of certain clinical and statistical data has been emphasized. Although it is impossible to predict which patients might develop this condition, a number of the articles reviewed stressed factors common to all cases. Careful attention to all details and close cooperation of anesthetist and surgeon can be of utmost importance in prevention of cardiac arrest.

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PRIMARY BONE TUMORS SEEN IN CHILDREN

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The early recognition of bone tumors in children is as important as the recognition of any type tumor in either child or adult. Prompt diagnosis and treatment are our only means toward a possible cure of malignant bone tumors. It is extremely important not only to recognize a bone tumor but to differentiate between benign and malignant ones. This decision is sometimes quite difficult to make and, of course, the mode of treatment depends entirely upon it. Mutilating surgical procedures should never be done until a competent, pathological consultation on the biopsy section has been obtained. It is often necessary to have several pathologists examine the biopsy slides before a definite opinion can be reached. Frozen sections can not be depended on.

The history and physical examination are important in determining valuable information as to the presence or absence of a tumor. An example of information gained from the history is the differentiation between infection (osteomyelitis) and tumor (osteogenic sarcoma), injury (myositis ossificans) and tumor.

The laboratory is of considerable aid in differentiating lesions which we may encounter. Serology should be obtained routinely, especially in any patient having a

cystic lesion of bone; likewise, serum phosphatase and calcium levels should be obtained, as hyperparathyroid disease may be present rather than a primary bone tumor. Alkaline phosphatase determination has limited importance; an increased level in the absence of obstructive jaundice indicates bone proliferation. Alkaline phosphatase elevation may be present in rickets, bone tumors, or following fractures. A complete blood count is important to rule out the possibilities of leukemia or other blood dyscrasias which may produce changes in a bone or bones possibly simulating a primary bone tumor. Stereal puncture may aid similarly. Scout x-rays of long bones and the skull should be carried out, as a lesion may appear, clinically, to be primary in one bone, but latent generalized bony involvement of a constitutional disease may be present. A chest plate should be made routinely because, certainly, any mutilating surgical procedure such as amputation or massive resection of a tumor should not be done, other than for palliative reasons, if there has already been metastasis to the lung.

Surgery of the definitive type is not an emergency. If it is strongly felt that the tumor is malignant, x-ray therapy may be started locally and to regional nodes after biopsy is performed, and it may be continued until a definite pathological opinion is obtained. Rarely is it necessary to delay definitive treatment more than two weeks

Read before the Association in annual session, Montgomery, April 22, 1955.

From the Department of Orthopedic Surgery, Medical College of Alabama.

while sections are being made and studied.

BENIGN TUMORS

The bone tumors predominantly seen in children are benign. The most common type is an osteochondroma, or exostosis as it is usually called. These tumors may be single or multiple and usually occur near the metaphyseal end of long bones. There are certain characteristic x-ray findings present in these tumors. They usually spring from a wide osseous or else a pedicle-type base and arise directly from the cortex with an overlying expanding cap. The cap is composed of cartilage undergoing calcification, and an undifferentiated connective tissue capsule covers the latter. The cartilage is arranged in a disorderly fashion, but is similar to that found in the epiphyseal plate of all long bones. It has been estimated that not more than five per cent of osteochondromas become malignant. The malignant changes are characterized by accelerated growth, particularly by pain, and usually occur after the third decade of life. A large cartilaginous cap, ill defined on its outward margin, is radiological evidence of malignant changes. Surgery is indicated, however, often because of a painful bursa developing over the osteochondroma, or else because of repeated trauma to the region of the tumor. Excision should be done in a retrograde manner, with complete removal of the cartilaginous cap with its potentially malignant fibrous tissue covering. Figure 1 dem-

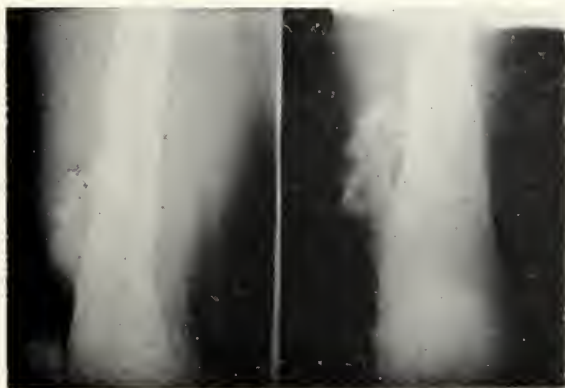


Fig. 1

onstrates a solitary osteochondroma of bone.

Multiple exostoses, Ollier's disease, or hereditary deforming chondrodysplasia, are probably the easiest group of bone tumors to diagnose by x-ray, because they are multiple, there is a widening of the metaphyseal

end of the long bones, and there is usually a deformity of the ulna and/or fibula. Surgery is indicated as mentioned above, and for prevention of deformities. It must be remembered that these tumors stop growing at the same time the long bone growth

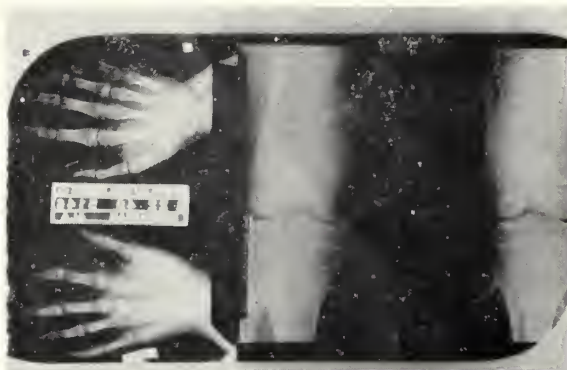


Fig. 2

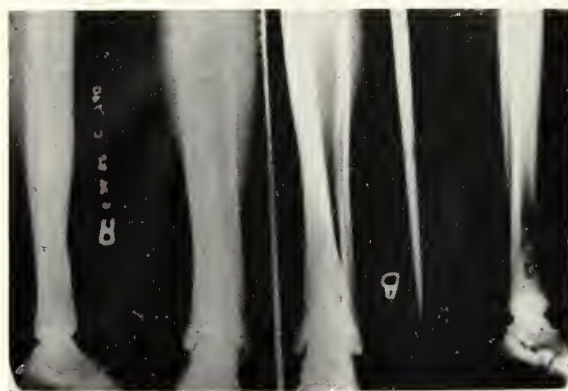


Fig. 3

ceases. Figures 2 and 3 reveal changes commonly seen in this disorder.

Probably the next most frequent bone tumor seen in children is the benign cyst. This usually occurs between the ages of five and fifteen years. Quite frequently the first evidence of the lesion's presence occurs when a pathological fracture is found in a large cyst of a long bone, particularly the upper end of the humerus or femur. A cyst may also be an incidental finding when the child is radiographed for other causes. There are certain x-ray characteristics of these tumors which aid in determining that they are benign. There is an area of sclerosis about the outer border or lining of the tumors and they have a smooth scalloped border. The tumor occurs near the metaphysis of long bones, is usually located in the central portion of the bone, and there is a fusiform expansion. Trabeculae are ir-

regularly placed throughout the cyst, and they rarely perforate the cortex unless a fracture is present. Surgery is often indicated because of pain, and we emphasize a complete work-up should be carried out on these patients, and when in doubt a biopsy should be performed. Treatment, when indicated, should consist of curettage, with collapse of the cyst wall, followed by packing the cavity with cancellous bone. It is felt that, when a cystic lesion results in a pathological fracture, most will be cured spontaneously, as the cystic lining is col-



B Fig. 4 A

lapsed by the fracture. Figure 4 A and B shows the characteristics of a benign cystic tumor of the solitary type, and healing that takes place after curettage, followed by primary packing with bone chips.

Eosinophilic granuloma is usually manifest by a localized lesion. It is of a cystic nature fairly centrally placed in the bone. It is quite commonly seen in flat bones, for example, pelvis and skull, and occasionally in long bones, particularly in the upper shaft or the neck of the femur. There is no



Fig. 5

periosteal reaction present. The differential white count reveals a five to ten per cent eosinophilia. Biopsy is usually required for making a definite diagnosis. The lesion is microscopically composed of mi-

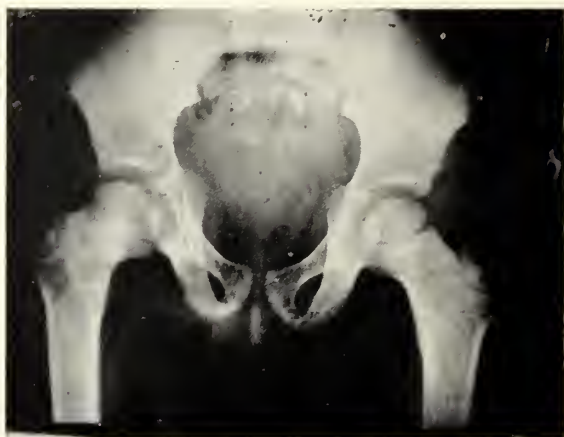


Fig. 6

crophages, lymphocytes, giant cells and foam cells, but eosinophilic cells predominate. Treatment is curettage, followed by x-ray. The prognosis is excellent in these cases. Figures 5 and 6 are an example of a lesion in the neck of the femur treated in the above manner, with recovery. This lesion was present in a five-year old, colored male. These tumors may be multiple and progression less acute. If so, the syndrome is classified as Hand-Schuller-Christian disease. This entity may have associated splenomegaly, exophthalmos, and diabetes insipidus. There is a slightly different pathological picture. The treatment is x-ray therapy and prognosis is favorable but not as much so as in the typical eosinophilic granuloma cases.

Osteoid osteomas are seen occasionally in children. They occur in cancellous or cortical bone and are characterized by localized pain and perhaps swelling of bone, with radiographic findings simulating a Brodie's abscess. The tumors are cystic, measuring about two centimeters in diameter, with a perifocal condensation of bone and a small opaque central nidus. These tumors are benign and consist of osteoid spicules surrounded by numerous osteoblasts, fibroblasts and osteoclasts; in other words, immature bone. The treatment is block resection of the lesion. It has been reported that these tumors may be self-limited after a number of years. It must be stressed that one must definitely localize, by x-ray during surgery, the exact location of the tumor, as



Fig. 7

a block resection of normal bone may be done, necessitating a second procedure which caution could have prevented. Figure 7 is of osteoid osteoma of the neck of the femur in a three-year old female.

A rarer tumor is Codman's chondroblastic tumor. It is seen to arise from the epiphyseal portion of a long bone about the age of puberty but before the epiphyseal plate has closed. It produces destruction in the cancellous portion of bone and usually produces elevation of the periosteum. It must be differentiated from a giant cell tumor, and this is well done, particularly by age, as giant cell tumors occur in an older age group. Chondroblastic tumors are not necessarily confined to the epiphysis as giant cell tumors are, and they do not expand under a shell of bone. Codman's tumor may be benign or malignant, and a biopsy is necessary for differentiating. The treatment in the benign tumor is simply curettement and packing the defect with cancellous bone; whereas, if the tumor should be malignant, radical amputation should be done early and the prognosis is poor.

MALIGNANT TUMORS

Ewing's sarcoma is probably seen earlier in life than any other malignant bone tumor. It has been reported to occur from the age of two and one-half years through the age of sixty-six, with the greater percentage occurring between the ages of four and twenty-five. These tumors are most difficult to differentiate from osteomyelitis, both by history and x-ray findings. A low-grade fever may be encountered or it may run as high as 104° Fahrenheit, and is commonly observed late in the process. There may not be too much weight loss until the terminal stages of the disease are present. Intermittent swelling may occur which simulates infection. These areas may be incised and purulent material obtained to cloud the picture. The tumor usually occurs in the mid-shaft of a long bone, but it may occur in the metaphyseal region. The typical x-ray finding is periosteal reaction with lamination, and there is early thickening of the cortex of the bone, with mottling of the medullary portion. In recent years it has been advocated that x-ray therapy might be of considerable value in obtaining five-year cures in these tumors. However, more recently, reexamination of the initial pathological specimens in those patients treated successfully with x-ray therapy revealed the original diagnosis was incorrect and that most of these tumors were *reticulum* cell sarcomas. It is felt the primary choice of treatment is biopsy, followed by x-ray therapy until the diagnosis is obtained, and then amputation or radical resection if the bone is not amenable to amputation. Definitive treatment is probably best followed by x-ray therapy too. The prognosis is very poor in these patients, with metastases occurring in the lungs, skull and other bones, and skin. The duration of life is variable, usually between three and twenty-one months. Figure 8 is of a 14-year old male, with lesion of the fibula of six weeks duration. A partial surgical resection was performed as the pathological report was osteomyelitis. There was recurrence within six weeks, and amputation was performed, followed by x-ray therapy. The patient expired approximately three months following amputation. Figure 9 reveals a Ewing's tumor involving the metaphyseal end of the tibia which could not be differentiated from osteomyelitis. This was in an eleven-year old boy, and was of eight to



Fig. 8

ten weeks duration. The tumor was biopsied, followed by x-ray therapy until the report was available, then high thigh amputation was performed, followed by further irradiation therapy. He subsequently developed pulmonary metastases with massive pleural effusion eight months later. He is still living at the time of this paper some twelve months following the initial surgery.

Osteogenic sarcomas are divided pathologically and radiologically into sclerosing and lytic types of tumors. The sclerosing type occurs very seldom in children. The lytic type is seen infrequently and may be very confusing in diagnosing early by x-ray. The tumor occurs usually in the metaphyseal region of long bones. It may be confused with giant cell tumor, Ewing's tumor, osteomyelitis, or a simple cyst. The most salient diagnostic feature is the central area of destruction which extends through an unexpanded cortex, with considerable periosteal reaction being present. The extension of the tumor is asymmetrical, and pathological fractures occasionally occur. Clinically these tumors were formerly diagnosed as bone aneurysms, as a bruit is often present. There is usually marked swelling about the tumor, with considerable increased vascularity being present in the



Fig. 9

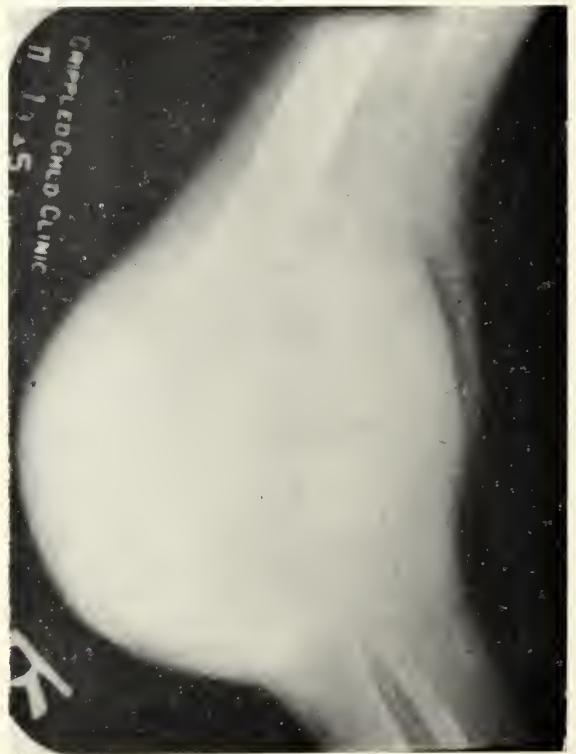


Fig. 10

skin. Biopsy is necessary in making a diagnosis. The treatment of choice is amputation or radical resection in those cases in which amputation can not be performed. In a series of one hundred twenty-one cases, only sixteen lived five years following surgery. Patients have been known to succumb five years following surgery, or later, and there have been no cures reported in cases involving the upper shaft of the femur or the humerus. X-ray treatment is of only palliative value. Figure 10 shows a tumor of this type, which is fairly characteristic, involving the lower end of the femur. The parents would not grant permission for surgery and the child has not returned for ob-



Fig. 11

servation. Figure 11 reveals a tumor in a young adult who had been treated approximately three months for osteomyelitis by intensive penicillin therapy. A mid-thigh amputation was performed and the patient, in the past six months, has gained approximately thirty pounds, and has been fitted with a prosthesis and is ambulatory.

SUMMARY

A complete history and physical examination must be obtained on all patients with a bone tumor. Laboratory determinations can be most helpful, with specific procedures being a "must" in certain lesions. Radiographic studies, even though not diagnostic in many instances, are of great value, particularly in ruling out generalized skeletal disease. Biopsy of questionable lesions, with expert interpretation by one familiar with bone pathology, is required before carrying out radical surgical treatment.

We have utilized standard texts and periodicals in the preparation of this paper.

1023 South 20th Street

Low-Salt Diet May Help Disease of Liver—A low-salt diet may help some persons with cirrhosis of the liver return to a more normal life, provided they are willing to cooperate and no other complications arise.

Dr. Charles S. Davidson, Boston, studied 30 patients with cirrhosis of the liver, a disease frequently associated with chronic alcoholism. Moderate or severe undernutrition is "characteristically associated" with the disease, and retention of fluid in the abdominal cavity usually accompanies the disease in its severe state.

A low-salt diet controlled fluid retention and improved nutrition in more than half of the 30 patients, of whom 28 were alcoholics. The diet also produced apparent improvement in liver function and apparent lowering of portal hypertension, a disorder of blood pressure in the veins leading into the liver.

However, Dr. Davidson pointed out that although these improvements occur, a patient's progress may be limited by the problems of chronic alcoholism and physical complications of cirrhosis, such as hepatic coma, which may result in death.

Twelve of his patients failed to improve because they refused to cooperate, returned to alcoholism, or died, he said.

Of the 18 who did improve, four returned to alcoholism, five died of various causes, and one developed a psychosis of unknown cause. Thus only six remain well.

Four of the patients lost the fluid within two months after beginning the diet, while 14 lost it over a period of three to 16 months. During those months they usually showed "a striking improvement" in nutritional status, and experienced increased feelings of well-being and improved appetite, Dr. Davidson said.

Portal hypertension seemed to decrease, which suggests that the low-salt diet might be considered as an alternative to surgery for treatment of portal hypertension in certain cases, he said.

Dr. Davidson, of the Thorndike Memorial Laboratory, Boston City Hospital, and Department of Medicine, Harvard Medical School, reported his findings in the November 26 Journal of the American Medical Association.

The work was done under the sponsorship of the Commission on Liver Disease of the Armed Forces Epidemiological Board, and was supported in part by the Office of the Surgeon General, Department of the Army, and by grants from Merck & Co., Inc., Rahway, N. J., and Lederle Laboratories, Pearl River, N. Y.

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John W. Simpson Birmingham
J. Paul Jones Camden
John L. Branch Montgomery
J. O. Finney Gadsden
E. G. Givhan, Jr. Birmingham
J. D. Perdue Mobile

STATE HEALTH OFFICER

D. G. Gill Montgomery

DELEGATES AND ALTERNATES TO THE AMERICAN
MEDICAL ASSOCIATION

Delegate—J. Paul Jones Camden
Alternate—D. G. Gill Montgomery
(Term: January 1, 1954-December 31, 1955)
Delegate—E. Bryce Robinson, Jr. Fairfield
Alternate—B. W. McNease Fayette
(Term: January 1, 1955-December 31, 1956)

THE MONTH IN WASHINGTON

If advance signs mean anything, the Eisenhower Administration next year can be expected to ask Congress for substantially more money for medical research, both direct research by scientists on the U. S. payroll and grants to others.

Currently the federal government is spending more money on medical research that at any time in history—almost \$98 million through the National Institutes of Health alone. In addition, other millions are being spent on medical research in the Department of Defense, Veterans Administration and other agencies. Much of it is difficult to isolate in the federal budget.

A special committee named by the National Science Foundation at the request of former Secretary Hobby has been at work for some time on an appraisal of HEW's medical research programs. Its report, due before the reconvening of Congress, should be valuable to both the administration and the appropriations committees.

Here are a few examples of what is happening this year:

The National Cancer Institute has \$24.8 million to spend, about three million more than last year, with two-thirds going out in grants to non-federal researchers. The National Heart Institute also is working on a much more liberal budget, \$18.7 million in contrast to last year's \$16.6 million. Because of the spectacular publicity now being given to heart research as a consequence of President Eisenhower's illness, it is a foregone conclusion that next year this institute will get a great deal more money.

The Mental Health Institute is profiting by the largest single increase of any research operation, almost \$4 million, from \$14.1 to \$18 million. Here again the prospects are for a substantial increase next year; problems of mental health are receiving much public attention, a situation that will not be ignored by Congress. Furthermore, the nationwide survey of mental health problems now about to get under way will point up the shortcomings in mental health research, and be an additional argument for more U. S. dollars.

All the other research institutes also shared in last session's Congressional generosity. The Institute of Arthritis and Metabolic Diseases has about \$2.5 million

more, \$10.7 million instead of the \$8.2 million of last year. The Institute for Neurological Diseases and Blindness went from \$7.6 million to \$9.86 million, the Microbiological Institute from \$6.1 million to \$7.5 million, and the Dental Health Institute from \$1.9 to \$2.1.

As has been customary with recent Congresses, the Senate and House this year actually voted more money for medical research than the Bureau of the Budget permitted the Public Health Service to request. That may not be the situation when appropriation bills come up next session. Secretary Folsom of the Department of Health, Education, and Welfare did not take office until Congress was about to adjourn last summer, but since then he has repeatedly gone on the record in favor of even greater U. S. expenditures for research. In October Mr. Folsom declared:

"... Today we find new problems and new opportunities. We find that heart disease, cancer, and arthritis are taking an increasing toll. And so today as a nation we are changing our lines of battle to fight this increase in chronic and major diseases. All the facts point to one great need. It is the need for more research—to learn how these chronic diseases are started, so they can be prevented; to learn to detect them in the early stages, so they can be cured. . . ."

Again in November, addressing a conference on antibiotics, Mr. Folsom struck the same key, only this time more firmly. After noting that the U. S. now is spending over 12 times more on medical research than it was spending in 1946, he declared: "We must seriously consider making even more funds available for medical research to bring even greater benefits to humanity."

* * *

The Joint Congressional Committee on the Economic Report may have some health legislation to offer next year as a result of a study of the problems of the low-income family, including methods of paying hospital, physician and drug bills.

The medical and criminal problems connected with narcotic addiction have occupied the attention of two Congressional groups between sessions, subcommittees of the Senate Judiciary Committee and the House Ways and Means Committee. The latter is particularly worried over abuses it claims to have discovered in the use of barbiturates and amphetamines.

Dr. Frank B. Berry, Assistant Defense

Secretary for health and medical matters, in his annual report warns that the doctor procurement problem again may become acute, despite last summer's two-year extension of the act. He said the Department may not be able to obtain all the older physicians it needs because of the amendment barring the drafting of men over 35 if they have applied for a medical commission and been rejected on purely physical grounds. Also, Dr. Berry thinks the ratio of 3 physicians per 1,000 of troops may be too narrow a margin for safety.

ASPIRIN FOUND AS EFFECTIVE AS CORTISONE IN ARTHRITIS

The humble aspirin tablet has proved to be just as effective as the hormone cortisone in treating cases of rheumatoid arthritis, the number one crippling disease in the United States, according to results of a two-year study by British doctors.

The study was made by the Joint Committee of the Medical Research Council and Nuffield Foundation of Great Britain, and was published in the *British Medical Journal* (Sept. 17, 1955). Summing up the results, the report said:

"... for practical purposes there has been remarkably little to choose between cortisone and aspirin in the management of this group of patients. . . ."

While extremely significant, this finding did not come as a complete surprise to American physicians. Many had previously reported aspirin's effectiveness to be on a par with cortisone or ACTH in treating rheumatoid arthritis, the very painful joint disease for which medical science still has no cure. The condition disables some 4,000,000 men, women and children in the U. S. There are more arthritic cases here than all the victims of polio, cancer, diabetes and tuberculosis combined.

Confirmation of aspirin's usefulness in arthritis was disclosed in 1954 in an interim report by the British investigators. At the end of the first year's tests with 58 patients, 28 given aspirin and 30 given cortisone, the progress of the two groups was found to be almost similar. All patients were adults, in the early stages of the disease.

The symptomatic improvement in all cases was about parallel in the second year, according to the doctors. In some respects, such as range of wrist movement, strength of grip and dexterity, even the slight differences previously existing between the

groups were narrowed. However, patients on aspirin showed a reduction in joint tenderness while those on cortisone revealed no change. As a further indication of the similarity in effectiveness, the study notes that the average hemoglobin level and blood sedimentation rate had responded more favorably to cortisone than aspirin in the first year.

"This advantage of the cortisone group has vanished during the second year," the report stated.

A similar pattern emerged in comparing side reactions from the two drugs. Reactions were recorded for 19 patients on cortisone and 21 on aspirin in the first year. During the second year the figures were 19 and 12, respectively.

The average daily dose of aspirin considered to be achieving optimum effectiveness was 75 grains, or 15 tablets a day of the five-grain aspirin tablet commonly used in this country. Some patients received over 100 grains daily. An average of 75 mg. daily was given the cortisone cases.

Respecting the patient's generalized condition, it was found that four cases in each group were in remission (the disease was temporarily halted). Six cortisone cases and five aspirin cases had "very active" arthritic conditions; 14 on cortisone and 13 on aspirin were capable of doing their usual work and taking normal physical recreation; and nine cortisone patients were still gravely incapacitated, compared with seven on aspirin.

"In no respect do the two groups differ by more than might easily be due to chance, and in most respects they are distinguished more by their equalities than by their differences."

POLIO AHEAD: THE REASONS BEHIND THE 1956 ALABAMA MARCH OF DIMES

Although the number of polio cases reported in Alabama in 1955 was less than half the average number of the previous five years, Alabama will still have polio problems in 1956. The Salk vaccine is a major weapon against paralytic poliomyelitis, but it has not yet won the war against this disease.

Continuing cooperation of physicians must be had both in administering the vaccine and in caring for patients already paralyzed and *who will be* paralyzed in spite of the vaccine. The Salk vaccine is not 100% effective and it will take considerable

time yet, perhaps years, before all individuals most susceptible to paralytic poliomyelitis can be fully immunized against it.

The National Foundation for Infantile Paralysis, supported solely through public contributions to its January March of Dimes, has made an enviable record, both in this state and nationwide, for meeting the problems posed by paralytic polio. In 1955 the March of Dimes gave 315,000 cc. of Salk vaccine without charge to the state of Alabama to initiate a statewide vaccination program.

The results already reported from the use of the vaccine are most encouraging but they must not be allowed to blind the eye of the medical profession to the road that still lies ahead. There remains a great need for additional research to improve the Salk vaccine, to determine the duration of immunity it effects (and conversely to determine the need for "booster shots"), and to provide the best possible treatment for patients already or yet to be involved with paralytic poliomyelitis. There is also a vast need for the professional education of young men and women who will contribute to the necessary research and help give the needed treatment.

To pay for research, education and aid to polio patients, the March of Dimes needs \$47,600,000 in 1956. Alabama physicians, knowing both the need and the record, will want to support and urge their patients to support the 1956 March of Dimes in their own communities.

A brief review of the record of the National Foundation for Infantile Paralysis in Alabama, where it has 67 local chapters, should help to orient physicians to the many services to patients and the professions which have been made possible by the March of Dimes since 1938, when the National Foundation was founded.

Over \$2,140,000 has been spent in Alabama by local chapters for the care of polio patients.

A total of 67 National Foundation scholarships and fellowships has been awarded to Alabama residents.

Emergency aid in dollars and in equipment for polio patients has been generously supplied to Alabama. In the first 10 months of 1955, for example, a total of \$44,365 in emergency aid was sent to 13 Alabama chapters by the national headquarters of the National Foundation. In the year 1954 the amount was over \$58,400 to 27 chapters.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

OPINION SURVEY ON SOCIAL SECURITY

W. A. Dozier, Jr.
Director of Public Relations

Last summer, when the new proposed amendments to the Social Security Act were pushed through the House of Representatives without open hearings, it became evident that this matter would be of major concern during 1956. Especially was this true because of the proposal to give cash disability benefits at fifty years of age. Since it was believed that the officers of the Association would be called upon to speak for the group, a survey was made to determine how the members felt.

The following questionnaire was sent to each member of the Association.

OPINION SURVEY ON SOCIAL SECURITY
MEDICAL ASSOCIATION OF THE STATE
OF ALABAMA

- I. On coverage of physicians by Social Security, I think they: (check one)
- should be left out.
 - should have optional coverage.
 - should have compulsory coverage.
- II. On cash disability benefits at 50 years of age, I think it: (check one)
- is a good plan.
 - is unimportant to the medical profession.
 - is harmful and should be opposed.
- III. On extension of benefits such as increasing the amount paid, I think the amount: (check one)
- should be increased further.
 - should be frozen where it is.
 - should be reduced.
- IV. On reducing the age for eligibility, I think it: (check one)
- should be lowered.
 - should remain at present level.
 - should be raised.

At the time the questionnaire was sent out, there were 1,950 members of the Association. From Table I it can be seen that there was a 37.49% return. This is a reliable sample though one thing should be pointed out. This return is smaller than those received on some previous surveys, and this may be due to one or both of two factors. Either the profession has not informed itself enough to express an opinion

or as individuals they do not feel the matter is of great importance to them.

TABLE I
NUMBER AND PER CENT OF RETURNS WITH
BREAKDOWN BY AGE GROUPS AND
POPULATION AREAS

	Complete Association	Age 50 or below	Age above 50	Population area up to 25,000	Population area 25,000 to 100,000	Population area above 100,000
Total returns	731	469	262	324	81	326
Per cent of returns	37.49	64.16	35.84	44.32	11.08	44.60

It was not felt that overall figures could tell all that was needed; so, as can be seen in Table I, the returns were divided into age groups and into groups according to the size of the town where the person lives. It is not surprising that more people under fifty answered than did those over fifty. In the population groups, however, the small return from the 25,000 to 100,000 areas is surprising.

Table II gives an analysis of the answers received from the whole Association. Table III is a breakdown by age groups, and Table IV shows the returns by population areas. These analyses do not show any startling results, and a comparison of these with the complete returns shows that they are relatively the same.

TABLE II
NUMBER AND PER CENT OF RETURNS FOR EACH
QUESTION AND ANSWER

	Complete No. answer- ing	Association % answer- ing
I. Physician coverage:.....	725	99.18
should be left out.....	267	36.82
should have optional coverage.....	421	58.06
should have compulsory coverage.....	37	5.10
II. Cash disability at age 50:.....	701	95.89
is a good plan.....	119	16.98
is unimportant to the medical profession.....	105	14.98
is harmful and should be opposed.....	477	68.07
III. Payments:.....	677	91.24
should be increased further.....	104	15.59
should be frozen where it is.....	463	69.41
should be reduced.....	100	15.00
IV. Eligibility age:.....	691	94.52
should remain at present level.....	505	73.08
should be raised.....	64	9.26
should be lowered.....	122	17.66

TABLE III
NUMBER AND PER CENT OF RETURNS FOR EACH
QUESTION AND ANSWER WITH BREAKDOWN
BY AGE

	Age 50 or below		Age above 50	
	No. answer- ing	% answer- ing	No. answer- ing	% answer- ing
I. Physician coverage: 466			259	
should be left out 184	184	39.48	83	32.05
should have optional coverage 263	263	56.44	158	61.00
should have compulsory coverage 19	19	4.08	18	6.95
II. Cash disability at age 50: 457			244	
is a good plan 59	59	12.91	60	24.59
is unimportant to the medical profession 54	54	11.82	51	20.90
is harmful and should be opposed 344	344	75.27	133	54.50
III. Payments: 428			239	
should be increased further 54	54	12.63	50	20.92
should be frozen where it is 303	303	70.78	160	66.94
should be reduced 71	71	16.59	29	12.13
IV. Eligibility age: 443			248	
should be lowered 76	76	17.15	46	18.55
should remain at present level 325	325	73.35	180	72.58
should be raised 42	42	9.48	22	8.87

From the survey one seems safe in saying that the members of the Medical Association of the State of Alabama have the following opinions on social security and the proposed amendments: physicians should have optional coverage; cash disability at age fifty is harmful and should be opposed; payments should be frozen where they are, and the eligibility age should remain at its present level. The age of the person answering the questionnaire and the population of the town in which he lives do not seem, in most instances, to have a marked influence on his opinion.

TABLE IV
NUMBER AND PER CENT OF RETURNS FOR EACH
QUESTION AND ANSWER WITH BREAKDOWN BY
POPULATION AREAS

	Population area up to 25,000		Population area 25,000 to 100,000		Population area above 100,000	
	No. answering	% answering	No. answering	% answering	No. answering	% answering
I. Physician coverage: 320			81		324	
should be left out 120	120	37.50	34	42.00	113	34.87
should have optional coverage 180	180	56.25	47	58.00	194	59.87
should have compulsory coverage 20	20	6.25	0	.00	17	5.25
II. Cash disability at age 50: 309			77		315	
is a good plan 59	59	19.09	6	7.79	54	17.14
is unimportant to the medical profession 44	44	14.24	9	11.68	52	16.51
is harmful and should be opposed 206	206	66.67	62	80.53	209	66.35
III. Payments: 298			73		296	
should be increased further 51	51	17.11	8	10.95	45	15.20
should be frozen where it is 199	199	66.78	54	73.98	210	70.94
should be reduced 48	48	16.11	11	15.07	41	13.85
IV. Eligibility age: 308			73		310	
should be lowered 63	63	20.45	10	13.69	49	15.81
should remain at present level 213	213	69.16	56	76.72	236	76.13
should be raised 32	32	10.39	7	9.59	25	8.06

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

ALABAMA'S PROSPECTS FOR SPECIAL NEW MEDICAL FACILITIES

Contributed by
Nadine Pitts, Director
Division of Public Health Education

When the United States Congress, a state lawmaking body or a city council, for that matter, passes certain legislation or an ordinance, one question which often arises is: what does it mean? In other words, how does the act affect a certain group, an individual or everybody? The law may make possible some activities that could not proceed lawfully without its passage. In other cases, the legislation may provide funds for a specific project that might not be attempted without such financial aid. Thus, legislation frequently requires some interpretation. If the law is designed to take care of an emergency situation, it may have only immediate and short-term effects. On the other hand, it may be the beginning of a long-range program, and months, sometimes even years, may be needed to measure its accomplishments.

With these thoughts in mind, one pertinent question today is, what does Public Law 482 passed by Congress in 1954 mean to you? It is perhaps not too much to predict that this legislation will affect, either directly or indirectly, all Alabamians, as well as all the rest of the people in the United States.

Public Law 482 is another name for the Medical Facilities Survey and Construction Act of 1954. It was, in reality, an amendment to the Hill-Burton Hospital Construction Act. The original Hill-Burton Act was passed several years ago—in 1946. And the federal funds that were made available at that time and in the years since have enabled Alabama to construct more and better hospital and medical facilities for the citizens of the state.

Now, for the first time, federal money will be made available—under Public Law 482—for four new kinds of medical facilities.

These are chronic disease hospitals, diagnostic and treatment centers, rehabilitation centers, and nursing homes.

How great is the need for these facilities in Alabama, you may ask, and just what kind of treatment and help are they designed to give? First of all, the very fact that national legislation has been passed is some evidence that the need is great—and widespread. That is not to say that there are none of these facilities in operation at the present time. There are indeed some of each type. But there are not enough to meet present needs, and, far from decreasing, the need grows greater every day.

The need might be said to grow out of America's present high degree of preventive medicine, as well as our increasing aging population. This is especially true of the need for chronic disease hospitals and nursing homes. Such is the degree of our victory over acute illness today that many of them no longer pose as problems of major concern. Instead, people today increasingly become victims of chronic diseases—illnesses that endure not for just a few days but rather for months and even years.

However, enough acute illnesses still occur for their victims to fill the available beds in our clinics and hospitals. Most of the general facilities today, then, of necessity continue to serve as short-term treatment centers rather than long-term ones. Moreover, the professional staffs of these general hospitals are especially trained to cope with acute illnesses, more so than with chronic diseases. Occasionally, some victims of chronic illnesses are admitted to general hospitals and clinics. This practice might be considered makeshift in that it undoubtedly has not been accepted as a permanent solution. For one thing, the desirable type of care for the chronically ill patient has not always been forthcoming. This is perhaps inevitable in the general hospital surrounding, with its necessary emphasis on the short-term needs of acutely ill persons—the bulk of its patients.

Rehabilitation centers are needed for the physically handicapped people in our communities. Such physical handicaps may

be the outcome of a serious disease or a disabling injury. The increase in chronic illness, plus perhaps a larger number of injuries growing out of our industrialized, mechanized society, has added to the ever larger ranks of the physically handicapped, and the total number of this group promises to keep rising, rather than to fall. Moreover, there is a backlog of handicapped persons who need rehabilitation services.

Thus, the need for special facilities for the physically handicapped is not a new problem. However, what is new is the increasing recognition of the necessity to return these individuals to their homes and to their jobs. And, in many cases, this goal cannot be achieved without first doing such things as retraining the handicapped for new kinds of work. A new approach and a growing realization of community responsibility, then, account for the new hope of adequate rehabilitation services for this group.

How do these facilities—chronic disease hospitals, rehabilitation centers, diagnostic and treatment centers and nursing homes—differ from general hospitals? They are different in a variety of ways, but all of them have this in common: they are designed to give longer periods of care and treatment than the general medical facility.

A chronic disease hospital, for instance, usually has patients who cannot afford to pay for the care they need. Many of them have exhausted their resources in the early stages of the illness. Actually, it has been found in practice that it is often cheaper to install and maintain a chronic disease wing in a general hospital than to construct a separate facility. The separate hospital would need expensive, new equipment and a separate staff. On the other hand, a chronic disease wing would have the advantage and benefit of all the staff of the general hospital. A provision could be made for selecting some staff members who are especially interested in the chronic diseases. Moreover, the general hospital staff—the doctors, nurses, administrators and others—would have the opportunity to learn more about the type of care the chronically ill patient should receive. Although care for these long-term patients is important now, it will undoubtedly be even more important in the years to come.

The rehabilitation center is designed to restore a physically handicapped person to

his former station, inasmuch as is possible, or to fit him for a different place in the community. It is an institution which brings together and focuses upon the disabled individual several types of services required to plan and execute a complete, not just a partial, program of rehabilitation. These services ordinarily include medical, vocational, psychological, social and placement aid.

Ideally, the rehabilitation center has some distinctive characteristics. In one center or organization are the facilities and processes for moving the disabled person as far as possible along the road from a bedridden state to employment. The evaluation of the patient's condition and the outlook of the degree and character of his physical and vocational restoration are coordinated in one approach to his problem. Rehabilitation centers are not hospitals, schools or industries, although they are somewhat like all these institutions in some respects.

The rehabilitation center does not take the place of the physical medicine and rehabilitation activities of other community agencies. Rather, the center supplements the work of these groups: whereas the individual agencies are concerned with special aspects of the big problem of rehabilitation, the center is concerned with coordination of all phases, to increase the quality and quantity of the work done.

The case of a young woman in another state—who could just as easily have been an Alabamian in some respects—serves to show the way a rehabilitation center works. The mother of two small children was discharged from a general hospital paralyzed from the waist down. The cause of the paralysis was unknown. The young woman was taken to a local rehabilitation center, where the staff estimated that in three months, with proper help, she could learn to walk.

Voluntary and official agencies in the community undertook to provide the money and special help needed, and the young woman was moved into the rehabilitation center. Some special equipment, a pair of braces, was required and a local group supplied these. We do not know the outcome of this particular case, but the outlook was very good that the treatment she received at the center would enable her to return to her family and to care for them.

Nursing homes as they exist today in Ala-

bama and elsewhere are of two types. One is the kind which offers custodial care only, without regard for any medical treatment or expert care. By far the most important, as far as long-term care for the chronically ill is concerned, is the type which offers skilled nursing care.

In the face of the great need for adequate nursing homes, some such institutions operate today by providing only the minimum amount of expert care. Sponsoring organizations, with the financial resources to provide medical and nursing services, have not been forthcoming widely. The existing facilities suffer from inadequate housing, lack of trained nursing personnel, lack of medical care, and evidently a lack of public support.

The State Health Department's Division of Hospital Planning has recommended some solutions for the nursing home problem. The Division is responsible for planning all federally aided medical facilities constructed in Alabama. This unit has pointed out that general hospitals and nursing homes are closely related. Therefore, hospital authorities are ideally suited to operate nursing homes in conjunction with their hospitals. However, other nonprofit organizations will be needed as sponsors if Alabama is to have a well-rounded, adequate supply of nursing homes.

Diagnostic and treatment centers are the fourth type of facility for which federal aid is now available. As the name implies, this medical institution is for the diagnosis and treatment of illnesses. However, it functions primarily for a particular type of patients—for those who are ambulatory or walking rather than bedridden. At the present time in Alabama, most all diagnostic and treatment services for ambulatory patients are provided for in the private offices of practicing doctors. Also, most of the hospitals in the state have out-patient departments to provide services for persons who are not bedfast. And county health departments and some industries make this type of service available.

The federal aid under Public Law 482 should make it possible for Alabama to have more adequate diagnostic and treatment centers than those in existence in the state at the present time. The unsuitable ones at the present operate and provide service in space designed and intended for other types of service. In many cases, out-patient diag-

nosis and treatment are not separated from general hospital activities, and the quality of the services suffers. Better facilities may be obtained by constructing separate buildings specifically designed for diagnosis and treatment, or by improving the facilities in current use through renovation and new equipment.

It will undoubtedly take several years before even a good start can be made at supplying an adequate number of these types of medical facilities in Alabama. The amount of construction will depend on the continuance of federal aid.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

SEPTEMBER 1955

Examinations for diphtheria bacilli and Vincent's	558
Agglutination tests	840
Typhoid cultures (blood, feces and urine)	737
Brucella cultures	5
Examinations for malaria	145
Examinations for intestinal parasites	3,342
Darkfield examinations	1
Serologic tests for syphilis (blood and spinal fluid)	31,379
Examinations for gonococci	1,453
Examinations for tubercle bacilli	2,900
Examinations for Negri bodies	69
Water examinations	1,864
Milk and dairy products examinations	5,251
Miscellaneous examinations	659

Total 49,203

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director
CURRENT MORBIDITY STATISTICS

1955

	Aug.	Sept.	E. E.* Sept.
Typhoid and paratyphoid fever	6	4	8
Undulant fever	2	0	3
Meningitis	9	2	7
Scarlet fever	17	31	29
Whooping cough	151	91	29
Diphtheria	46	33	35
Tetanus	4	5	4
Tuberculosis	269	221	218
Tularemia	0	0	0
Amebic dysentery	0	0	2
Malaria	0	0	9
Influenza	52	43	46
Smallpox	0	0	0
Measles	29	9	22
Poliomyelitis	38	24	48
Encephalitis	1	4	2
Chickenpox	8	3	5
Typhus fever	0	3	7
Mumps	66	40	19
Cancer	473	454	359
Pellagra	0	1	2
Pneumonia	114	112	74
Syphilis	170	104	349
Chancroid	4	0	12
Gonorrhea	399	269	397
Rabies—Human cases	0	0	0
Positive animal heads	19	19	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR JUNE 1955, AND COMPARATIVE RATES

PROVISIONAL BIRTH AND DEATH STATISTICS AND COMPARATIVE RATES FOR JULY 1955

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During June 1955			Rates* (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births.....	6052	3613	2439	22.7	24.3	24.6
Deaths.....	1989	1205	784	7.5	7.7	7.9
Fetal deaths.....	145	55	90	23.4	26.6	22.2
Infant deaths—						
under one month.....	137	69	68	22.6	20.8	25.3
under one year.....	180	84	96	29.7	30.4	33.8
Causes of Death						
Tuberculosis, 001-019.....	26	10	16	9.8	12.5	16.5
Syphilis, 020-029.....	5	1	4	1.9	3.0	6.1
Dysentery, 045-048.....	3	1	2	1.1	1.5	1.9
Diphtheria, 055.....					0.4	0.4
Whooping cough, 056.....	1		1	0.4	0.4	
Meningococcal infections, 057.....	1		1	0.4	0.8	0.4
Poliomyelitis, 080, 081.....	3	2	1	1.1	1.5	0.8
Measles, 085.....					0.4	
Malignant neoplasms, 140-205.....	297	207	90	111.5	89.2	86.3
Diabetes mellitus, 260.....	17	12	5	6.4	8.0	8.8
Pellagra, 281.....					1.5	0.4
Vascular lesions of central nervous system, 330-334.....	236	161	75	88.6	107.8	97.1
Rheumatic fever, 400-402.....					1.5	
Diseases of the heart, 410-443.....	649	418	231	243.7	241.5	252.5
Hypertension with heart disease, 440-443.....	131	59	72	49.2	61.9	59.1
Diseases of the arteries, 450-456.....	39	21	18	14.6	15.9	10.7
Influenza, 480-483.....	3	2	1	1.1	1.9	2.7
Pneumonia, all forms, 490-493.....	36	20	16	13.5	19.7	19.6
Bronchitis, 500-502.....	1		1	0.4	0.4	
Appendicitis, 550-553.....	1		1	0.4	0.8	1.5
Intestinal obstruction and hernia, 560, 561, 570.....	10	5	5	3.8	6.8	4.6
Gastro-enteritis and colitis, under 2, 571.0, 764.....	9	2	7	3.4	8.0	5.8
Cirrhosis of liver, 581.....	9	7	2	3.4	4.6	3.4
Diseases of pregnancy and childbirth, 640-689.....	6	1	5	9.7	9.1	13.6
Congenital malformations, 750-759.....	21	12	9	7.9	4.7	3.6
Accidents, total, 800-962.....	153	98	55	57.4	57.3	63.7
Motor vehicle accidents, 810-835, 960.....	73	57	16	27.4	19.0	34.5
All other defined causes.....	374	187	187	140.4	118.1	138.9
Ill-defined and unknown causes, 780-793, 795.....	89	38	51	33.4	31.1	38.0

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During July 1955			Rates (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births.....	6967	4294	2673	25.3	25.9	29.0
Deaths.....	2063	1259	804	7.5	8.2	7.9
Fetal deaths.....	144	69	75	20.2	23.7	22.9
Infant deaths—						
under one month.....	174	100	74	25.0	21.6	23.7
under one year.....	239	126	113	34.3	30.6	31.8
Causes of Death						
Tuberculosis, 001-019.....	29	18	11	10.5	12.9	14.5
Syphilis, 020-029.....	6	1	5	2.2	3.3	3.3
Dysentery, 045-048.....					0.7	0.5
Diphtheria, 055.....					0.4	
Whooping cough, 056.....	3	1	2	1.1	0.4	
Meningococcal infections, 057.....	2	2		0.7	1.1	1.5
Poliomyelitis, 080, 081.....	4	1	3	1.5	1.5	2.6
Measles, 085.....					0.7	
Malignant neoplasms, 140-205.....	266	181	85	96.7	91.9	102.1
Diabetes mellitus, 260.....	23	14	9	8.4	10.3	8.2
Pellagra, 281.....	2	1	1	0.7	0.4	0.7
Vascular lesions of central nervous system, 330-334.....	273	167	106	99.2	121.2	92.8
Rheumatic fever, 400-402.....	2	1	1	0.7	2.9	0.7
Diseases of the heart, 410-443.....	638	427	211	231.8	249.1	236.9
Hypertension with heart disease, 440-443.....	131	61	70	47.6	55.8	52.7
Diseases of the arteries, 450-456.....	31	16	15	11.3	16.2	14.1
Influenza, 480-483.....	3	1	2	1.1	2.6	1.9
Pneumonia, all forms, 490-493.....	39	24	15	14.2	15.8	13.4
Bronchitis, 500-502.....	1		1	0.4	0.7	0.7
Appendicitis, 550-553.....	5	4	1	1.8	1.5	1.1
Intestinal obstruction and hernia, 560, 561, 570.....	12	6	6	4.4	4.8	5.6
Gastro-enteritis and colitis, under 2, 571.0, 764.....	20	4	16	7.3	7.3	8.5
Cirrhosis of liver, 581.....	8	7	1	2.9	4.0	3.0
Diseases of pregnancy and childbirth, 640-689.....	6	1	5	8.4	16.6	13.8
Congenital malformations, 750-759.....	33	26	7	4.7	5.1	3.7
Accidents, total, 800-962.....	144	94	50	52.3	62.8	47.2
Motor vehicle accidents, 810-835, 960.....	61	39	22	22.2	27.6	19.7
All other defined causes.....	413	231	182	150.1	153.3	173.8
Ill-defined and unknown causes, 780-793, 795.....	100	31	69	36.3	37.5	43.1

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal
deaths—per 1,000 deliveries; Maternal deaths

—per 10,000 deliveries; Deaths from specified
causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

SKIN PLANING FOR ACNE SCARS HAS LIMITATIONS

While skin planing is the best treatment yet devised to improve acne scars, it cannot produce "miraculous new skin," according to a report in the November 26 Journal of the American Medical Association.

The report, prepared by two dermatologists, Drs. Herbert Rattner, Chicago, and Charles R. Rein, New York, was written at the request of the A. M. A.'s Committee on Cosmetics.

An accompanying Journal editorial said, "Enthusiasm for this method should not be discouraged, but its limitations must be clearly understood by the physician and the patient. Dermabrasion can improve skin appearance in many patients; it cannot help others."

The operation, first introduced in 1952, is new in technique, though not in principle. The skin is "frozen" and then abraded with a motor-driven wire brush, which is manipulated in short strokes. The procedure is repeated, progressing from area to area, until all the scars have been planed away. More than one treatment is often necessary.

The tremendous interest in the technique shown by both physicians and patients reveals the "amazing importance and often-exaggerated importance of a scarred skin to a person's emotional well-being," the report said.

Both the report and the editorial warned that patients must understand that the results may fall somewhat short of their expectations.

The editorial said, "Often those who need it most obtain the least relief. . . . Those who suffer from severe acne scarring and obtain the least skin improvement are often more enthusiastic about results than the less disfigured patient who experiences marked improvement by the physician's standards.

"Complete dissatisfaction can be expected in those persons who regard their scarred skin as solely responsible for their failures and discontentment in life. An improved skin will not have the magical effect of bringing them the social and economic success that they expect. On the contrary,

it removes the excuse the patient has used for his failure.

"There is a real possibility in such patients that harm will be done by converting a minor psychological disturbance into a severe one."

However, the report pointed out that most patients are satisfied with the results. In the beginning practically all patients who sought treatment were treated. Now two or three of every five seeking treatment are rejected either because of unsound emotional attitudes or physical reasons.

The results depend a great deal upon the skill of the operator and the depth and shape of the scars, the report said. Flat superficial scars respond better than do deep-pitted "ice-pick" types. Results are more satisfactory on the face than on the chest, shoulders, back, or neck.

Scars of recent origin apparently respond better than do old scars, the report said. Youngsters whose acne is still in the active stage usually are not treated, although a few lesions do not interfere with the operation.

The patients usually look their best about six months after the operation. The treatment may be repeated several times at intervals of four to six months, if necessary, the report said. The age of the patient is not important, although results seem to be better in young persons.

The procedure may be used for scars from herpes zoster, chickenpox, and smallpox.

Dr. Rattner is professor and chairman of the department of dermatology of Northwestern University Medical School and editor of the A. M. A. Archives of Dermatology. Dr. Rein is associate professor of clinical dermatology and syphilology at New York University Post-Graduate Medical School.

CONSULTANTS ANSWER VARIOUS QUERIES

Consultants for the Journal of the American Medical Association today settled a word definition, debunked an idea about penicillin, and gave reassurance about a possible hazard of radio and TV set accidents.

Their comments in the November 19 A.

M. A. Journal were in answer to questions from doctors.

There is probably little or no danger from the breakage of a selenium rectifier, a device used in television sets and radios, a physician consultant said. The rectifier contains the chemical element selenium, the fumes of which can be dangerous in large doses.

But the objectionable odor, ordinary home ventilation, and the brief exposure period all help to lessen the danger from the accidental burning out of selenium rectifiers in home radio and TV sets, he said.

Another consultant, in explaining the proper usage of the word "clinic," said it sometimes applies to free dispensaries and sometimes to a teaching session in which patients are used. But it most commonly means the "pooled efforts and facilities of several physicians practicing together as a group."

The penicillin now being processed is not made from mold derived from the original one of Dr. Alexander Fleming, penicillin's discoverer, another consultant said.

The original penicillin was derived from one strain of the mold, but other strains now are being used because they give a higher yield of penicillin. Experimental work is being carried on to isolate and develop new strains that will produce still higher yields.

CHEMICAL POISONING TREATMENT OUTLINED

Physicians have been advised on methods of treating organic phosphate poisoning, which has become increasingly prevalent in recent years through the misuse of some insecticides.

The potential use of these same phosphate compounds as chemical warfare agents also makes it important that physicians become better acquainted with ways of diagnosing and treating such poisoning, two University of Illinois scientists said in the November 19 Journal of the American Medical Association.

The compounds are among the most powerful insecticides yet developed and extensive agricultural use has resulted in many accidents and deaths, they said.

The best known methods of treatment include the administration of the drug atropine sulfate to control nervous system effects; artificial respiration to treat respiratory failure, and general treatment for other symptoms.

In a review of literature on the subject, they found that atropine must be given as soon as possible and in larger than normal doses in order to combat the poisoning. The review of 25 cases showed a direct relationship between survival, the amount of atropine given, and the speed of administration, they said.

While an overdosage of atropine produces certain uncomfortable effects, they are not serious, but the consequences of inadequate treatment for organic phosphate poisoning are grave, they said. Therefore, treatment with atropine should tend toward overdosage rather than underdosage, they said.

The effects of the organic phosphates are prolonged and treatment must be continued "vigilantly" until all signs of poisoning are gone. Severe exposure or delayed therapy may result in death.

Other methods of treatment include: application of gas mask and/or removal from the site of the vapors; immediate washing away of any liquid contamination; drainage of excessive bronchial secretions that may block the airway; oxygen administration if necessary; treatment of the eyes with atropine to counteract eye symptoms, and administration of medicine to stop convulsions if they are not controlled by atropine.

The study by Archer S. Gordon, M. D., Ph. D., and Charles W. Frye, M. S., Chicago, of the department of clinical science, College of Medicine, University of Illinois, was supported by a grant from the Army Chemical Center Medical Laboratories, Edgewood, Md.

SPECIALIST SEEKS HELP IN HEART ATTACK SURVEY

Dr. Paul Dudley White, Boston heart specialist, has asked his colleagues to help him find out how many other Americans have had heart attacks like that of President Eisenhower.

In a letter published in the November 12 Journal of the American Medical Association, Dr. White asked physicians to send him information about their own cases of acute coronary thrombosis, which is more in the limelight than it ever was before the President's illness.

Dr. White asked the physicians to answer even if they had had no cases during the period Sept. 24-Oct. 23, 1955, inclusive. He also asked them to give details about patients who became ill with coronary thrombosis before June 25, 1955.

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GRANULOSA CELL CARCINOMA IN THE THIRD TRIMESTER OF PREGNANCY

ABRUPTIO PLACENTAE, HEMOPERITONEUM AND INTESTINAL OBSTRUCTION

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Of all of the complications of the third trimester of pregnancy, one of the rarest and yet one of the most dangerous for the mother is that of coexisting granulosa cell carcinoma.

This tumor is one of the three so-called feminizing tumors of the ovary, the others being the thecomas and luteomas. The origin, gross and microscopic appearance, and alterations in physiology of these tumors have been extensively discussed in the literature.¹⁻⁶ If one remembers that granulosa cell carcinoma generally produces an excess of follicular hormone, the usual symptoms could be anticipated. These would include the precocious puberty and anovulatory menstruation in the preadoles-

cent, sterility and menorrhagia during the reproductive span of life, and recurrence of menstruation in the postmenopausal period. Whether or not these tumors tend to produce masculinizing phenomena has not been established. The case to be presented later would bear out such a possibility. Also, Novak⁷ mentions the possibility in connection with the more common type of luteoma which he believes arises from luteinization of the granulosa cell tumor.

In 1951 Diddle and O'Connor⁵ made an exhaustive analysis of the literature, finding a total of 930 cases of granulosa cell tumor reported, only 29 of which were associated with pregnancy. Of these 29, only 12 were coexisting with pregnancy. This study was undertaken to find the available information on those cases complicating the third trimester, with particular reference to clinical application. Most of the cases found and summarized below failed to give subjective or objective findings which would be of help in diagnosis.

Case 1. Magnus⁸ reported a 29 year old patient who was seen at the 28th week with a small, firm mass just to the left of the uterus, which was thought to be a fibroid. This mass enlarged rapidly. At an elective section at the 39th week, a normal 6 pound, 15 ounce infant was delivered. A cystic

Read before the Alabama Association of Obstetricians and Gynecologists, Birmingham, October 13, 1955.

1. Mayer, R.: The Pathology of Some Special Ovarian Tumors and Their Relation to Sex Characters, *Am. J. Obst. and Gynec.* 22: 697, 1931.

2. Novak, E., and Brawner, J. N.: Granulosa Cell Tumors of the Ovary. Clinical and Pathological Study of 36 Cases, *Am. J. Obst. and Gynec.* 28: 637, 1934.

3. Spencer, John A., and Hollenbeck, Z. J. R.: Granulosa Cell Tumor, *Am. J. Obst. and Gynec.* 54: 281 (Aug.) 1947.

4. Schulze, Margaret: Granulosa Cell Tumor of the Ovary, *West. J. Surg.* 47: 114 (March) 1939.

5. Diddle, A. W., and O'Connor, K. A.: Feminizing Ovarian Tumors and Pregnancy, *Am. J. Obst. and Gynec.* 62: 1071 (Nov.) 1951.

6. French, W. G.: The Clinical Behavior of Granulosa Cell Tumor of the Ovary, *Am. J. Obst. and Gynec.* 62: 75 (July) 1951.

7. Novak, E.: *Gynecological and Obstetrical Pathology*, 1940, pp. 366. W. B. Saunders Co., Philadelphia.

8. Magnus, Haines: Granulosa Cell Tumor of the Ovary, *J. Obst. & Gynaec. Brit. Emp.* 57: 737 (Oct.) 1950.

granulosa cell tumor measuring 13 x 11.5 x 7 cm. was removed. The patient made a normal recovery and could not be traced.

Case 2. Spencer and Hollenbeck³ reported a 22 x 17 x 11 cm. tumor of the right ovary removed from a 40 year old colored gravida VIII, para VI, who showed excessive pain immediately after spontaneous delivery of a 3½ pound baby, at the seventh month. The tumor was attached to the liver, transverse colon and iliac fossa, leaving the lower pole and the ovarian pedicle free. On removal of the tumor, hemorrhage was so severe as to require hot gauze packs. These were removed fractionally over the next eight days. Four thousand (4,000) roentgen units were administered 2 months later, and the patient was alive and apparently well five and one half years later.

Case 3. Falls, Ragins and Goldenberg⁹ reported a tumor of the left ovary measuring 9½ x 10½ x 10½ cm. discovered in a 32 year old gravida III, para III, two months after the spontaneous birth of a 7 month baby. This tumor was thought to have been present during the latter part of the pregnancy.

Case 4. Bolli¹⁰ reported a 24 year old patient who, after the spontaneous delivery of a 7 month baby, immediately went into shock and expired. Autopsy revealed a large granulosa cell tumor of the right ovary which had ruptured, 1500 cc. of blood being found free in the peritoneal cavity.

Cases 5 and 6 were both mentioned by Greenhill.¹¹ In each instance the tumor was found after delivery of normal, full term babies. In one case the tumor was removed immediately and the patient was alive and well some six years later (Nov. 1953). The other case refused immediate surgery but had the tumor removed later because of excessive vaginal bleeding. This case could not be traced.

Case 7. Diddle and O'Connor⁵ reported a

primigravida, age 22, who delivered a 7½ pound infant on Oct. 3rd, 1945. Nine days later a mass 10 cm. in diameter was found to the right of the uterus. Surgery was refused. The patient had vaginal bleeding for 5 days every 14 days, and 3 months after delivery a 10 cm. tumor of the right ovary was removed. Four years later the patient was apparently well and had given birth to another baby.

Case 8. Schulze¹ reported that v. Szathmary mentioned a case in which a granulosa cell tumor was obstructing labor at term and was removed. She was unable to find a reference for this case.

The following case illustrates many of the pathological processes which can produce bizarre clinical findings, and, if not adequately treated, would certainly lead to a fatality.

CASE REPORT

A colored girl, age 17, gravida I, para 0, was first seen on Sept. 8, 1952, complaining of pain in the right side of the abdomen. This had been present for the past 72 hours, becoming progressively more severe. The pain was intermittent, colicky in nature, and was accompanied by anorexia, nausea and vomiting. Her last regular menstrual period had occurred on the 26th of Feb. 1952, and the uterus was approximately the size of a 28 week gestation. She complained bitterly of pain and tenderness at an area 5 cm. above McBurney's point. Her temperature, pulse and blood pressure were normal. There was moderate leukocytosis, a normal differential count, and moderate microcytic anemia. Urinalysis showed 2 to 3 white blood cells per high power field.

The family history was noncontributory. Her past history revealed no serious illness, injury or surgery. The menarche occurred at the age of 12. She had a 28 day interval with a normal duration and quantity of flow. Shortly after the menarche she developed intermittent episodes of pain in the right side of the abdomen, dull aching to colicky, and sometimes throbbing in nature, accompanied by anorexia, nausea and vomiting, with no change in bowel habit, and no urinary tract symptoms. No direct relationship to the menses had been noted. The pain would last for two days to a week or more and gradually improve. She had been hospitalized several times during the preceding five years for observation for ap-

9. Falls, F. H.; Ragins, A. B., and Goldenberg, M.: Clinical and Pathological Studies of Feminizing Tumors of the Ovary, *Am. J. Obst. and Gynec.* 57: 1107 (June) 1949.

10. Bolli, C.: Premature Delivery Due to Granulosa Cell Tumor of the Ovary, Rupture of the Tumor in the Puerperium, Hemoperitoneum and Death, *Lav. d. Ist. anat. e istol. pat.*, Perugia 6: 5, 1949 from *Internat. Abstr. Surg.* 90: 492 (May) 1950.

11. Greenhill, J. P.: Yearbook, Obstetrics and Gynecology, p. 463, 1947, The Yearbook Publishers, Chicago. Also personal communication.

pendicitis. The cause of the pain had not been determined. Shortly after the onset of her pregnancy the pain in the right side of the abdomen became much more severe and the frequency of attacks increased. Considerable nausea and vomiting were present during the first few months of pregnancy, and this was followed by anorexia during the remaining time. She was unable to eat a full meal without excessive abdominal pain developing. She had repeated episodes of spotting to frank bleeding during the first four months of gestation, and on several occasions developed severe suprapubic pain, not accompanied by urgency, frequency or syncope.

Physical examination revealed a well developed but poorly nourished girl at about the 28th week of gestation. The most striking feature on inspection was a severe hirsutism which involved the face, trunk and extremities. While the breasts were small, they were considered within normal limits. The clitoris was normal size. The pelvis was android in type. The entire right side of the abdomen was tender, but there was no rigidity, and no shifting dullness could be elicited. The area of maximum tenderness was 5 cm. superior to McBurney's point. The fetal heart tones were normal.

The patient was hospitalized, and on the following day the early morning urine was loaded with white blood cells. She was placed on chemotherapy, and after 48 hours of treatment was greatly improved. She was discharged to be followed at the clinic.

Three weeks later the patient was readmitted to the hospital with a moderately severe upper abdominal distention, severe nausea, vomiting, dehydration, and loss of electrolytes. The hemoglobin was down to 8.5 gm. She complained bitterly of pain, generally in the region of the lower pole of the right kidney. After the abdomen had been decompressed, fluid and electrolyte balance restored, and 1000 cc. whole blood administered, the patient showed considerable improvement. The radiologist reported an intravenous pyelogram as showing poor concentration of dye in the right kidney, with a mild hydronephrosis, bilaterally, and with evidence of chronic pyelonephritis. On passage of a catheter into the pelvis of the right kidney, 20 cc. of urine escaped as a continuous flow. The retrograde film confirmed the radiologist's

diagnosis of pyelonephritis. The size of the kidney pelvis was larger than considered physiological for a late pregnancy. The patient had complete, but temporary, relief of pain in the right side of the abdomen immediately after the drainage of the right kidney. Abdominal pregnancy had been ruled out by physical examination and x-ray. However, it was noted that the right side of the abdomen appeared slightly larger than the left, but no definite mass could be palpated. The patient was discharged from the hospital Oct. 3, 1952 with a diagnosis of 31 week intra-uterine gestation and pyelonephritis, right.

Forty eight hours later the patient had a sudden onset of severe pain in the right side of the abdomen and in the suprapubic region. She had an urgent desire to void and to defecate, and on getting out of bed she passed some 180 to 200 cc. of bright red blood from the vagina. Nausea and vomiting started almost immediately, and the patient was rushed to the hospital. On arrival, there was no evidence of shock, but the patient appeared in great pain, and the entire abdomen was markedly distended. Several doses of Demerol were given for the relief of pain, with very little improvement. The lower abdominal pain was apparently continuous. There was no further bleeding. Five hours after the onset of the pain and bleeding, the patient delivered a premature, 1400 gram infant, inside the unruptured membranes, with the placenta and membranes intact. Although the patient was under constant observation by a capable obstetrical supervisor, labor had not been recognized. Resuscitation of the infant was difficult, but normal respiration was finally established, and the baby lived 13 hours. The placenta showed two-thirds of its maternal surface covered with a hematoma from premature separation.

Even though the patient had delivered, her abdomen appeared as distended as before. Consequently, a Miller-Abbott tube was passed, Wangenstein suction started, several transfusions were given, and fluid and electrolytes again restored. After the distention was relieved, a well defined mass was palpable on the right side of the abdomen. This extended up under the rib margin, down below the pelvic brim, and from the right side of the abdomen to the midline. The mass was tender, and did not move with respiration. The radiologist re-

ported it as probably an ovarian neoplasm.

The following day an exploratory laparotomy was performed. The peritoneal cavity was distended with serosanguineous fluid. The uterus appeared normal for 36 hours postpartum. The left adnexa were normal. The right adnexa were incorporated in a partially solid and partially cystic mass 23 x 15 x 15 cm. It was adherent to the posterior parietal peritoneum and the transverse colon. Following delivery, contraction of the uterus caused traction on the ovarian pedicle which resulted in firm pressure on the terminal ileum at the pelvic brim, and produced a complete intestinal obstruction. While attempting to separate the cystic mass from an area of plastic exudate on the posterior peritoneum, a large amount of serosanguineous fluid escaped into the peritoneal cavity, 2000 cc. being aspirated. A major portion of the tumor appeared to be a multilocular, thick-walled cyst which contained many large blood clots, some of which were quite old and well organized, and others of more recent origin. In addition there was a considerable amount of tissue which could not be grossly identified. This tissue was irregular, rounded, elongated, firm, slightly lobulated, brownish purple in color, and the cut surface showed a glassy appearance, with various shades of gray, yellow, red, brown and black.

The pathologist reported: "Microscopically the tumor shows small, fairly uniform, rounded or oval nuclei without clearly demarcated cytoplasm. Some areas are dark because of high nuclear concentration, whereas other areas are pale because of a more diffuse occurrence of the nuclei. There is a slight tendency to pattern in some places, with nuclei forming columns. Moreover, small cysts are present. Several areas show necrosis. Diagnosis: Granulosa cell tumor, of the immature solid type, according to Schiller's classification." He pointed out: "The tumor looks benign at this time, but in view of all the hemorrhage and necrosis, and with the known course of these tumors, it is entirely possible that it is beginning to act like a malignant tumor."

After a study of the literature and obtaining the opinion of others on the subject, roentgen therapy was not given.

The patient had an uneventful convalescence. At the end of one year she had gained considerable weight. Her general physical examination, complete blood count,

red cell sedimentation rate, urinalysis and culture, chest x-ray and intravenous pyelogram were all normal. She was menstruating every 28 days with no discomfort and of normal duration and quantity. She had not had an attack of pain in the abdomen since her laparotomy. There was no change in the hirsutism.

In August of 1954 she delivered a normal, full-term baby after an uneventful pregnancy. At the end of the third year the patient is apparently well. The prognosis in this case is guarded and she should be kept under observation for many years.

COMMENT

For five years prior to her pregnancy this patient had repeated episodes of pain of sufficient intensity to justify hospitalization, and at no time was the cause of the pain evident. The pyelonephritis and mild hydronephrosis found in the latter part of pregnancy could have caused pain. However, the follow-up examination failed to reveal urinary tract pathology, and it is doubted that it was the cause of the pain during the preceding five years. The appendix was normal in appearance. We know that any granulosa cell tumor coexistent with pregnancy would have to be relatively inactive. The most likely surmise is that the tumor was present during this time, producing repeated small hemorrhages. After pregnancy was established, the gestation itself may have produced a more rapid growth, with the resulting increase in frequency and severity of attacks. The hirsutism causes one to think of arrhenoblastoma. However, there were no other findings to indicate such a diagnosis.

A review of the literature reveals one previous case of unrecognized labor in association with granulosa cell tumor, but no other cases of abruptio placentae or of acute intestinal obstruction were found.

Spontaneous rupture of the tumor with severe hemorrhage is not adequately stressed. French⁶ reviewed the literature in 1951 and found 25 cases with severe hemoperitoneum from a rupture of the capsule of a granulosa cell tumor. Barzilai¹² states: "A severe intra-abdominal hemorrhage due to rupture of the capsule of the tumor is quite peculiar to granulosa cell tumors, and is not rare." von Freisen¹³ states

12. Barzilai, G.: *Atlas of Ovarian Tumors*, p. 33, 1949, Grune and Stratton, New York.

13. von Freisen, B.: *Acta obst. et gynec. Scandinav.* 24: 8, 1943.

that a rupture is more common in granulosa cell tumors than in any other ovarian neoplasm.

Granulosa cell tumor complicating the third trimester of pregnancy is so rare that it will continue to be diagnosed, with rare exception, at laparotomy or postmortem examination. It should be kept in mind in any case of unexplained pain, especially if associated with evidence of intra-abdominal hemorrhage. The tumor may be present and cause no symptoms. It may cause an unexplained obstruction to what was anticipated as a normal delivery. It may be accidentally discovered during the postpartum period. On the other hand, it may mimic disease of almost any intra-abdom-

inal organ. At present, about all one can do is to keep the condition in mind as a possibility in the differential diagnosis of the complications of the third trimester of pregnancy.

SUMMARY

1. Eight previously reported cases of granulosa cell tumor complicating the third trimester of pregnancy are summarized.

2. An additional case in a 31 week primipara, complicated by partial abruptio placentae, unrecognized labor, rupture of the capsule of the tumor with hemoperitoneum, and further complicated by acute intestinal obstruction immediately postpartum, is reported.

AN INTERESTING CASE REPORT OF INTESTINAL OBSTRUCTION DUE TO AN ILEAC FECALITH

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and

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The patient (J. R. P.) to be considered in this case report was a white male child, aged six. The past and family history was irrelevant.

Present Illness: Forty-eight hours before admission to the hospital the mother stated that the child had eaten about twenty pieces of candy. These included gum-drops and hard suckers of the "jaw-breaker" type. About six hours later he began to vomit. The vomitus contained no blood, but some candy and food particles mixed with mucus and bile were identified. The following day the mother noticed that the child's abdomen was swollen. He had continued to vomit all solid food but did retain small amounts of fruit juices. He was admitted to the Colbert County Hospital November 26, 1954 in an acutely ill state.

Physical Examination: Temperature 101.3 degrees, pulse 138, respiration 30, blood pressure 108/66, weight 40 pounds. The heart and lung fields were not remarkable. The patient appeared quite acutely ill and dehydrated. The notable findings were limited to the abdomen. It was quite dis-

tended and tympanitic. No organs were palpated nor was any mass or rigidity elicited. Peristaltic sounds were barely audible and an occasional tinkle was heard. Crampy pains were present. The rectal examination was negative.

Laboratory Examination: Red blood count 5,110,000, hemoglobin 14.5 gm., white blood count 12,500; urinalysis: 4+ sugar, albumin negative, microscopic negative; blood sugar 165 mg. The stool examination was negative for parasites and occult blood.

Radiologic Report: Plain film of the abdomen (figure 1). A tube is present in the stomach. The stomach is dilated with air and is elevated. There is a bizarre unusual collection of air throughout the small bowel. These dilated loops traverse the abdomen from its upper limits to the zone of the false pelvis inferiorly. The colon is not identified. This dilatation represents a mechanical obstruction. The obstruction is thought to arise in the right lower portion of the pelvis, perhaps on the basis of a congenital ileal band or diverticulum. Peritoneal fluid is present.

Hospital Course: A Levine tube was passed into the stomach and Wangenstein suction applied. Parenteral fluid, 1000 cc. of 5% glucose in normal saline, was given



Fig. 1. (J. R. P.)—Plain film of the abdomen. Reveals marked small bowel distention. The dilated loops in the upper abdomen are jejunum and those in the lower part represent ileum. This indicates a mechanical obstruction.

slowly every eight hours. Enemata were given with a poor return. The patient's condition gradually worsened despite the supportive therapy. An exploratory laparotomy was performed thirty-six hours after the patient's hospitalization. A right paramedial line incision was made. On opening the peritoneal cavity about 500 cc. of blood-tinged fluid was encountered. The stomach and small intestine were distended. The jejunum and ileum had a bluish discoloration and were dilated to over twice their normal caliber. A hard irregular mass was palpated in the lumen of the lower ileum. It measured about 4.5 cm. in diameter and 8.0 cm. in length. It was lodged approximately 12 cm. orad to the ileocecal valve. The mass caused an intraluminal impaction while the ileac caliber caudad to this obstruction was normal. The colon was collapsed.

Rubber shod clamps were used to crush the foreign body. Gradually, fragmentation of this enterolith was effected. Fragments of the mass were successfully expressed manually from the dilated segment of ileum into the normal calibered ileum along with the entrapped fluid and air. This in turn

passed readily into the colon. A normal color soon returned to the previously dilated proximal loops of small bowel. An enterotomy was thus avoided. The abdomen was closed in the usual routine manner without drainage.

Just at the time of the final skin closure the patient vomited a large amount of fluid. He continued to vomit a copious amount of fluid in the immediate postoperative period while reacting to the anesthesia. Aspiration of the trachea and esophagus was carried out and a Levine tube was again passed into the stomach. These efforts were to no avail as the patient expired 4½ hours later. This was apparently an aspiration pneumonia death. The permission for a necropsy was not obtained.

Comment: A review was made of the medical literature over the past fifteen years. One reference was encountered where true small bowel obstruction occurred from an enterolith (ref. No. 6). Many cases were observed where the ileus originated from a gall stone impacted in the small bowel. This as an origin necessitates an internal biliary duodenal fistula. The obstruction from such a concretion may be initiated in the duodenum or anywhere along the course of the alimentary tract below this level. Cases have been reported where the concretion was incarcerated in an intestinal diverticulum. An impacted fecalith has been recorded numerous times as the source for acute colonic intestinal obstruction. One author pointed out the apparent association of casein and ingested dry food remnants as an obstructive cause.

It is possible in this case that the child ingested the gum-drops and suckers in rapid succession. Full mastication may not have occurred. They may have become somewhat coalescent in a rouleau formation and admixed with prior dry food remnants. This could have been the background, augmented by a period of abnormal dehydration followed by abnormal peristaltic waves, for the ileus manifestation.

It is to be noted that in the radiologic report two of the more common causes of lower right abdominal obstruction are listed. However, with a Meckel's diverticulum blood is frequently found in the stool. This knowledge was not obtained at the time of the report. The small bowel pattern was not that of a volvulus. The operative

procedure established the true cause for the obstruction which was relieved.

Rt. 1, Jackson Hwy. (Dr. Deibert).

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PHYSICAL THERAPY AND REHABILITATION IN ARTHRITIS

F. F. SCHWARTZ, A. B., B. S., M. D.
Birmingham, Alabama

In order to treat disorders of the locomotor system adequately, the general practitioner should possess some knowledge of the basic concepts of physical therapy. Even though not all the facilities needed may be available in his hands, yet there are some fundamental principles which should be applied to all forms of arthritis. The patient has to be treated at home as well as in the office, especially in the long drawn-out cases; and his psychological aspect is just as important as his physical ailments. The patient has to be kept occupied both physically and mentally in order to achieve results. Team-work among the internist, orthopedist, physiatrist, neurologist, nurses, social workers, and the family may spell the difference between success and failure. A farsighted approach, with definite objectives in the management of the arthritics, will aid the sufferers greatly. Among the objectives we may list the following:

1. Prevention of deformity,
2. Increased circulation,
3. Proper posture,
4. Relief of muscle spasm,
5. Orthopedic appliances, and
6. Self care and eventual economic independence.

In the office, the judicious application of heat in the form of infra-red, short wave, paraffin bath, or whirlpool bath will help

the circulation and muscle spasm. A new modality, ultrasonic energy, employed in our clinic in the last three years benefited a great number of patients with osteoarthritis.¹

Exercises may be given and demonstrated in the office and then prescribed for home therapy. Whatever modalities are to be used in the home, carefully typewritten instructions should include physical agents to be employed, time, distance, temperature, precautions and contraindications.

Since one of the most important contributing factors in osteoarthritis is the unequal distribution of stress and strain due to bad posture, the patient should be instructed in the correct way of standing, sitting, walking, sleeping and working.

Heat: The application of heat at home will add great comfort to the arthritic patient. An electric pad turned on "low" may be applied over the portion of the affected part for twenty minutes while the patient is still in bed. Then, upon arising, he can take a hot bath, the temperature ranging between 98 and 103 degrees F. for twenty minutes. Instruct the patient to avoid draft and exposure after the bath, drying the body with a thick bath towel. The same procedure may be repeated at night but the process is reversed, the bath first and then the heating pad. Of course, during an electric storm no bath or electric pad is to be employed. For the hands and feet the cheapest source of heat is the paraffin bath.

Read before the Association in annual session, Mobile, April 16, 1954, being a part of a panel on Arthritis.

The author is Associate Professor of Clinical Medicine, Medical College of Alabama.

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Ten pounds of paraffin are melted in a double boiler until all but one piece is dissolved. Dip the hands or feet in the paraffin bath ten times, allowing a few seconds between each dipping. Then withdraw the extremity and let the paraffin remain in place for thirty minutes, after which it may be peeled off and used over and over again.

Exercises: The best form of exercise, if the patient's condition will permit it, is using the extremities. Washing personal things, cooking, kneading dough in baking, and sewing are helpful for female patients; working around the house and garden for male patients. Developing hobbies, such as radio repair or woodwork, will help the patient in gaining a useful occupation compatible with his physical condition.

All exercises are preceded by the application of heat, either in moist or dry form. When an infra-red unit is available, heat may be given at 24 inch distance from the tip of the bulb to the surface of the body exposed for 15 minutes. In other cases moist heat in the form of warm compresses may be applied for twenty minutes to the parts to be exercised. Utmost care is to be observed in prescribing the correct temperature of the water in order that the patient's skin will not be burned. Other forms of heat may be applied through an electric pad, which is padded with bath towels, or the application of a hot water bottle which is not too heavy.

All exercises are to be progressive in repetition, commencing ten times morning, noon and night and adding one exercise daily. Pain and fatigue must be avoided from the exercises in the arthritic patients.

Exercises for the neck, shoulders, thoracic cage, hip and the lower extremities are carried out in the supine position, whereas exercises for trunk extension, neck extension, gluteal muscles and hamstrings may be performed in the prone position.

Generally, there are two types of exercises for arthritic patients, namely, the active type, which is performed by the patient himself and may be assisted by pulleys, weights and sandbags, and the passive, which is performed by the technician or some relative in carrying the joints through the range of motions.

In order to relieve stress and strain of the weight-bearing joints of arthritic patients, correct body mechanics have to be main-

tained by observing correct standing, sitting, walking and working postures. The patient is instructed to stand correctly by holding the head, chin, and chest up and contracting the lower abdominal wall. The feet are maintained in parallel position with toes pointing forward and the weight distributed to the outer and lower portions of the feet. Correct sitting posture can be maintained with a proper chair having high back, solid seat, and wide arm rest; and, in the case of a wheel chair, a movable and adjustable footrest in order to prevent knee flexion deformity. If in a sedentary occupation the patient is instructed to lean forward by flexing his body from the hip instead of flexing the dorsal or cervical region.

In walking, the arthritic patient should walk erect and, if support is needed, a crutch is much better for the erect posture than a cane. The shoes must be comfortable, laced oxford, and with heels not higher than 1½ inches. If the patient is bed-ridden, then correct bed posture should be observed by having his upper extremities in slight abduction, a small pillow instead of a large one under the neck, a small pillow under the lumbar region, and no pillows under the knee joints. The mattress must be comfortable and firm.

SUMMARY

1. Certain fundamental principles of treatment are applicable to all forms of arthritic conditions.
2. Posture and removal of stress and strain are very important factors.
3. Prevent deformity rather than cure deformity.
4. Home treatments are just as important as office or hospital treatments.
5. The patient has to be treated just as well as the disease process, hence the psychological aspect should not be neglected.
6. Keep the patient occupied both mentally and physically.
7. Team-work among the specialists and nursing and social workers is the secret of success.

916 South 20th Street.

Reserpine Helps Arthritis, Delirium Tremens Patients—Reserpine, a tranquilizing drug, has now been used to treat two more disorders—delirium tremens and arthritis.

New York and Los Angeles physicians reported in the December 17 *Journal of the American Medical Association* using reserpine (Serpasil), a derivative of *Rauwolfia serpentina*, for two groups of patients. The results warrant further trial of the drug as a method of treating both disorders, they said.

Drs. Milton Avol and Philip J. Vogel, Los Angeles, who treated 24 patients for delirium tremens, said reserpine "greatly shortened" the time necessary to free alcoholic patients of their agitation and hallucinations. In fact, all but three were relieved of their symptoms within 24 hours or less. The others were relieved within 48 hours. The average time was 18 hours.

Paraldehyde, a drug frequently used as a calming agent, takes much longer to produce desirable effects. In addition, chronic alcoholics very quickly develop a tolerance to paraldehyde, so that even large doses are ineffective or only partially effective, they said. Also the odor of paraldehyde pervading the wards is "distressing" to both patients and ward personnel.

While reserpine may cause some undesirable side effects, none appeared in any of these patients. However, the physicians pointed out that the dose should be "individualized" because of the great variations in reactions to the drug.

In addition to reserpine, the patients were placed on the usual treatment for acute alcoholism, including intravenous administration of fluids and high doses of vitamins.

The physicians said they thought a program of small daily doses of reserpine after the patients are discharged from the hospital might be helpful. This would alleviate some of the anxiety that causes these patients to resume drinking soon after discharge.

Almost half of the 30 patients with various types of arthritis given the drug showed some improvement, Dr. Harry Bartfeld, New York, said.

The drug inhibits emotional and psychological stimuli which cause muscle spasm and other changes in muscle which in turn cause tenderness, pain, and stiffness, he said.

The patients treated had osteoarthritis (a degenerative form), rheumatoid arthritis, a combination of those two types, and psychogenic rheumatism (arthritis of emotional or psychological origin).

Reserpine was of greater value in psychogenic rheumatism than in the other types.

The sense of well-being and serenity and general uplifting of spirit due to reserpine may help in giving the arthritic patient a better and more stable approach to his disease, Dr. Bartfeld said.

He pointed out that reserpine was the only form of treatment used in this study. Other drugs generally used for arthritis, gold therapy, psychotherapy, and physiotherapy "certainly" should be used in addition to reserpine when necessary, he said.

Doctor Prefers Steam Kettle to Newer Humidifier—The good old steam kettle works better than a mechanical humidifier for treating a childhood respiratory disorder, according to a Haifa, Israel, physician.

Dr. Abraham Friedman said that the steam kettle is better because it can produce more moisture than a cold-air mechanical humidifier, the now generally accepted apparatus. Moist air helps prevent the blocking of breathing passages which may occur in an acute inflammatory disease of the larynx, trachea, and bronchi.

He explained that, in breathing, the air enters the respiratory tract at room temperature and humidity. On its way down the air absorbs moisture from the membrane lining the passages. It finally is exhaled at body temperature and saturated with water. The difference in temperatures and humidities between the air inhaled and exhaled results in a continuous loss of water from the respiratory tract.

In acute respiratory disease, the loss is speeded up and the breathing passages eventually may be blocked by the formation of a dry crust on the membranes. The drier the inhaled air, the more water it absorbs from the membranes, thus increasing their "drying out."

To prevent obstruction, the air breathed in must be as moist as the air breathed out. This means that the temperature and humidity of the air inhaled should be approximately equal to the temperature and humidity of the air exhaled.

Since there is a ceiling on the amount of water air will hold at a specific temperature, the air temperature must be raised to increase water content. The mechanical humidifier may raise water content, but the low-temperature air cannot hold as much water as high-temperature air would, he said, adding that a steam kettle accomplishes both things.

While recommending the steam kettle method, Dr. Friedman warned that necessary precautions must be taken against the hazards of a burn and the development of a high fever in the child.

Dr. Friedman, of the department of pediatrics of Rambam Government Hospital, Haifa, made his report in the November *Archives of Otolaryngology*, published by the American Medical Association.

"Head Injury Epidemic"—Could Be Prevented—The only cure for the "head injury epidemic" now sweeping the country is prevention through safer automobile construction, a California neurosurgeon said recently.

Head and neck injuries account for nearly 70 per cent of all auto crash deaths, Dr. C. Hunter Shelden, Pasadena, said in the November 5 *Journal of the American Medical Association*. In spite of the "most concerted efforts" of neurosurgeons, the severe head injury is fatal, for once the brain is injured beyond a certain degree, there can be no recovery, he said.

Last year there were 5,200,000 reported auto accidents, 1,500,000 resultant injuries, 100,000 persons totally disabled, and 38,000 deaths—"rather lethal statistics to refer to a so-called pleasure car," Dr. Shelden said.

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THE MONTH IN WASHINGTON

The second session of the eighty-fourth Congress is under way, and in medical legislation—as in all other fields—this promises to be much livelier than last year's deliberations.

For one thing, neither the Republican administration nor the Democratic party, which is in control on Capitol Hill, got anywhere near as much as it wanted last year in medical legislation.

For another thing, and something that shouldn't be lost sight of at any time, both parties this year will be legislating with one eye cocked toward next November, when the voters make a choice between the two parties. Try as they might to pass laws for the good of all the people, neither party can afford to ignore the political realities of the situation: each will want to take credit for any legislation with popular appeal or where that is impossible, at least to see that the other party doesn't get the credit.

In front of this political mosaic, these are some of the medically-important issues that will be fought out in Senate and House:

1. Federal guarantee of mortgages on health facilities. This has been on the congressional calendar for two years; it was pushed hard in 1954, and was given some consideration in 1955. It would mean that the federal government would underwrite mortgages for hospitals, clinics and nursing homes, under certain conditions, thereby allowing some sponsors to obtain loans they couldn't otherwise get, or to obtain them on longer terms and with lower interest.

2. Federal grants for research facilities. Under this plan—approved last session by the Senate—the U. S. would make outright grants to laboratories, medical schools and clinics for building facilities for research in specific diseases, such as cancer and heart disease.

3. Federal aid to medical education. This perennial project probably is closer to congressional enactment now than ever before. The most popular bill is one restricting the federal role to grants for building and equipment, with a financial incentive held out to those schools willing to increase their enrollment. This bill may be tied in with some other grants bill, such as the one for research.

4. Salk vaccine. Legislation authorizing federal appropriations for the purchase of Salk poliomyelitis vaccine (\$30 million for the current year) expires February 15, virtually insuring congressional action of some sort before that date. One issue is whether the federal government should continue the grants; more controversial is the question of whether the U. S. should move in to control the allocation and distribution of the vaccine. Allocation and distribution now are handled under a voluntary program supervised by the U. S. Public Health Service.

5. Increases in federal appropriations for medical research. Over the last few years—since the National Institutes of Health came of age—Congress repeatedly has increased research grants over the amounts the Budget Bureau allowed Public Health Service to request. Indications are that this year the Budget Bureau may have to give way and allow important increases to be requested of Congress. Congress probably would want to add on its own special additions anyway, resulting in more money than ever before available for work on cancer, heart disease, mental illness, arthritis, blindness and the many other conditions.

6. OASI-covered persons could receive payments beginning at age 50 if determined to be disabled. Under present law retirement payments for all are available at age 65. The bill containing this provision (H. R. 7225) passed the House last session by an overwhelming margin. It is now before the Senate Finance Committee, where the next phase of the legislative contest will be fought out in 1956.

The lop-sided House vote on disability payments may be discounted in part because of the parliamentary maneuvering by sponsors of the legislation. House members had only 40 minutes to debate this bill, and no opportunity to amend it. It was a case of accepting the whole bill—which contains a number of other social security liberalizations not of medical significance—or being politically damned as opposed to social security per se.

The American Medical Association maintains that the present expanding rehabilitation programs would be undermined by cash payments for disability, that the financial and other long-range aspects of the disability payments plan have not been thoroughly studied, and that the machinery

for disability payments would inevitably project the federal government deeply into the medical care picture.

SOCIAL SECURITY—BIG ISSUE IN '56

Every physician who is conscious of his duties as a citizen should now be taking an active interest in a timely issue which the American Medical Association considers of great importance—not only to the medical profession but to all of the American people.

That issue is HR 7225, a bill passed by the United States House of Representatives last summer near the end of the congressional session. This bill, known as the Social Security Amendments of 1955, was first rushed through the House Ways and Means Committee without public hearings. Then it was passed in the House, by a vote of 372 to 31, under a suspension of the rules which barred amendments and limited debate to 40 minutes. The Senate Finance Committee, however, refused to take hasty action on a bill of such major importance. After hearing the many serious questions raised by Mrs. Hobby, then Secretary of the Department of Health, Education and Welfare, the Committee decided to hold extensive public hearings during the second session of the 84th Congress.

Just what is this legislation that appears to be so politically attractive to individuals with an eye on the 1956 elections? Why was the House majority leadership so determined to avoid open hearings and normal debate? Let's take a brief look at the main provisions of the bill.

This is the legislation which would lower the social security retirement age for women from 65 to 62; extend monthly benefits for permanently and totally disabled children beyond the age of 18; expand compulsory social security coverage to all self-employed professional groups except physicians, and raise social security taxes over and above the increases already scheduled for the next twenty years. Those provisions alone demand careful study of their effects on the philosophy, scope and financial stability of our social security system.

The most controversial section of the bill, however, is the one which would make permanently and totally disabled persons eligible to receive their social security retirement benefits at age 50 instead of 65.

It is this section which is of particular concern to the medical profession. It is of far greater concern than the question of voluntary or compulsory coverage of physicians under the social security system. That is a separate issue which we are not discussing in this editorial. The plan for a national system of permanent and total disability benefits has far more serious implications for medicine and the nation.

It raises questions such as these: Is there any real need for a federal program? What are the facts on permanent and total disability? Won't this duplicate or overlap existing programs of assistance and rehabilitation? What effect will cash handouts have on a patient's incentive to be rehabilitated? Won't this extend federal control over physicians?—and, finally—How will this affect the future of medical practice? Will this lead, step by step, to the lowering and eventual elimination of the age 50 eligibility requirement; then, cash benefits for the dependents of those who are permanently and totally disabled; then, a temporary disability benefits program; then, cash benefits or direct government payments for hospital or medical costs, and then, ultimately, a full-fledged system of government health insurance?

These are but a few of the many grave questions which already have been raised concerning this legislation. As physicians, we must be concerned over the medical aspects of the problem. As citizens, we also must be concerned over the trends and implications in the never-ending expansion of our social security system. The minority report of the House Ways and Means Committee expressed it this way:

"We do not believe that our committee has discharged its obligation to either the Congress or to the American people by its brief and closed-door consideration of this vital legislation. We have sought to point out the grave social and economic implications of the bill. We have dwelt at some length with the staggering ultimate costs of this developing program because we do not believe that either the Congress or the public has any conception of its magnitude."

Our social security system now has reached the point where any further changes may have a profound influence on the nation's economic, social and political future. The time has come to face up to the question of just what social security should

accomplish and just where it should stop. The Association strongly *urges* that the social security issue be taken out of the arena of vote-catching politics; that there be an objective, thorough study of social security in all its present and future aspects, and that the facts and realities emerging from such a study be used as the basis for a sound national decision on this vital issue. It especially protests precipitate action on the complex question of disability without thorough investigation of alternative mechanisms.

In our opinion, that is a reasonable, responsible policy that deserves the moral and intellectual support of every physician.

FORD FOUNDATION GRANTS

"The grant of funds by the Ford Foundation to the voluntary, nonprofit hospitals of our nation will result in tremendous improvement in hospital service to our people," according to Ray E. Brown, Chicago, President of the American Hospital Association. "It is almost impossible to grasp the full potentialities of this program," said Mr. Brown.

"The grant is completely without precedent in our voluntary hospital system. The hospitals concerned now have an immense responsibility to translate this gift into maximum benefits for the people of our nation, and we are sure that they will prove equal to this task.

"We applaud the emphasis placed by the Foundation on local determination of method to be used as each hospital seeks to improve and extend its services to the public under the terms of the grants. The inflexibility which the Foundation has put into this program will permit hospital trustees to take full advantage of their intimate knowledge of their communities and their needs.

"Thousands of projects which hospitals all over the country have deferred because they did not have the money to initiate them now will be possible because of the wise generosity of the Foundation.

"We believe that the voluntary hospital system has provided the American public with the best hospital care in the world. These grants will strengthen this voluntary system and the true beneficiary will be the American people."

BLOOD, SURGEON'S GREATEST AID IN ATOMIC WAR

Blood and its derivatives will be the surgeon's greatest aids in an atomic or guided missile war, according to Dr. Ross T. McIntire, former surgeon general of the Navy.

Dr. McIntire, executive director of the International College of Surgeons, writing in the *Journal of the College*, told of developments which will result in the saving of whole blood in the future.

"The use of plasma, serum albumin, fibrinogen and other derivatives will not only conserve the supply of whole blood but will be possible where blood transfusion is an impossibility; for example in the treatment of wounded men on the battlefield and in mass disasters in cities," he said.

"The use of plasma substitutes, such as Dextran, P. V. P., and others, will save lives in the treatment of shock."

He pointed out that blood is an important part of therapy for most hemorrhagic conditions, adding:

"The amount required is highly variable and is dependent upon many factors, among which is the level of fibrinogen. An examination of case reports to date suggests that early and adequate use of fibrinogen may result in large savings of whole blood."

Fibrinogen is a soluble protein in blood plasma and a factor in the clotting mechanism. It can be prepared commercially and has been found of great value in obstetrics and gynecology.

Dr. McIntire said standardization of transfusion equipment should be brought about promptly so as to permit international interchange. He also said that means should be found to preserve blood cells for at least 90 days; the present range is from 21 to 28 days.

Blood has occupied the attention of men of medicine from antiquity. It was not until 1628 that Harvey's treatise on the circulation of blood was published. Attempts through the ensuing years to transfuse blood, animal and human, resulted in failures and deaths. In 1900, Dr. Karl Landsteiner, a Viennese, reported that blood could be classified in groups.

That paved the way for successful transfusions. In World War II, blood played a big role in saving the lives of men suffering from hemorrhage and shock.

Blood derivatives came into use in World War II because the shipment of large quantities of blood over thousands of miles was impracticable. It was not until 1943 that a standardized solution made worldwide blood shipments possible.

Medical research so far has failed to reveal the secret of the red blood cell, Dr. McIntire pointed out, but he said exploration in the field of genetics of the blood group, now going on at Harvard University, may provide the answer.

EXAMINATIONS FOR FELLOWS IN I. C. S.

Four oral and four written examinations for Fellows in the United States Section of the International College of Surgeons will be conducted in 1956.

Oral conferences will be held on January 23, April 16, August 6, and October 22. The written examinations will be conducted on January 30-31, April 23-24, July 23-24, and October 29-30. These will be held at the Cook County Hospital and Cook County Graduate School of Medicine, Chicago.

The next convocation of the International College of Surgeons will be held in connection with the 21st annual congress in Chicago, September 9-13, 1956. Candidates qualifying prior to August 11 will be eligible for induction.

Further information may be had by writing to the Secretariat of the United States Section, International College of Surgeons, 1516 North Lake Shore Drive, Chicago 10, Ill.

MINIMUM CARE UNITS FOR CERTAIN PATIENTS

A minimal care unit for patients needing only minor surgery and treatment is one hospital's answer to personnel shortages. A report on the experience of the Hartford (Conn.) Hospital is featured in the November issue of *Hospitals*, Journal of the American Hospital Association.

Ernest C. Shortliffe, M. D., assistant director of the 704-bed Hartford Hospital, and Miss Mary E. Brackett, R. N., associate director of Hartford's nursing service, co-authored the report.

According to Doctor Shortliffe and Miss Brackett, this provision for patients who need only a minimum of nursing care helped within weeks to reduce the hospital's long

list of persons waiting for admission. These minimum care patients, previously given space in regularly staffed rooms, are now assigned to beds in the special short-term unit staffed with fewer persons.

The article explained:

"Originally, the intention was to open a unit to which patients could be transferred once their doctors had certified that only a minimum amount of nursing care was required. However, it was decided instead to run an experimental unit of 20 beds designed to receive the patient whose hospital stay was expected to be no greater than six days and whose condition indicated that a minimum amount of professional nursing care would meet his needs."

Patients admitted to the new unit included those admitted for diagnosis, minor gynecologic procedures, and interval appendectomy, and persons needing daily treatment in the department of physical medicine.

One of the aspects of the program is its expanded use of practical nursing services. The paper points out, "In the past the nursing service at Hartford had been conservative about using licensed practical nurses. As we have become more experienced with this group, the numbers of procedures the practical nurse is permitted to do has increased."

Planning, cooperation and adaptation of other hospital departments and effective personnel preparation are cited by Hartford as three of the reasons for the effective results.

REGIONAL MEETINGS OF INTERNATIONAL COLLEGE OF SURGEONS

Four regional meetings of the United States and Canadian Sections, International College of Surgeons, are scheduled for 1956.

The first, the Mid-Atlantic Region, meeting will be held at the Green Brier Hotel, White Sulphur Springs, W. Va., February 13-15. This will be followed by a meeting March 22-23 in San Jose, Cal. A Southeastern regional meeting will be held in the Read House, Chattanooga, Tenn., April 30-May 1, and a New England regional meeting in the Marshall House, York Harbor, Me., over the July 4 weekend.

What is to be the largest gathering of surgeons of international renown is scheduled for Chicago, September 9-13. At that

time, the 10th Congress of the International College of Surgeons will be held in conjunction with the 21st Congress of the United States and Canadian sections. Papers will be presented by physicians from all parts of the free world. Headquarters will be in the Palmer House.

Further information may be had by writing to the Secretariat of the United States Section, International College of Surgeons, 1516 North Lake Shore Drive, Chicago 10, Ill.

Committee Outlines Program For Poison Control—The American Medical Association's Committee on Toxicology has outlined four methods for combating the perennial problem of accidental childhood poisonings.

The methods include education, more stringent laws, establishment of poison centers, and greater efforts by local physicians. They were discussed in a report prepared for the committee by Dr. Jay M. Arena, Durham, N. C., and published in the December 17 Journal of the American Medical Association.

Bernard E. Conley, secretary of the committee, said "... the curiosity of children, coupled with the casualness with which many parents handle and store drugs and chemicals, are predisposing factors to most unintentional poisonings."

The "alarming feature" of the problem is the regularity with which various household agents and drugs are swallowed by children, the report said. Leading causes are drugs, especially aspirin and barbiturates, petroleum products, lead, corrosive agents such as lye, and arsenic.

Of approximately 14,000 accidental deaths that occur each year among children from 1 to 14 years, almost 1,500 are reported as being caused by accidental poisoning, but this figure is "far from correct" for many cases are never recorded, the report said.

Childhood deaths from poisoning occur disproportionately often in 12 southern states—Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North and South Carolina, Oklahoma, Tennessee, Texas, and Virginia, the report said.

For the barbiturates and aspirin there is little regional difference, but for corrosives and arsenic the rate in these southern states is six times that for the rest of the country. The rate for petroleum products, principally kerosene, is four times as high.

"Quite apparent to everyone" is the need for educating laymen and parents to the dangers of household agents, but many physicians also are unaware and must be educated, the report said. Manufacturers must be made aware of the seriousness of the problem and of their responsibilities. They should consider the use of distinctive safety containers and better labeling with warning statements and when necessary uniformly standardized doses for drugs.

While the present federal laws are useful as far as they go, they are far from adequate, the report said.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

REHABILITATING ALABAMA'S PHYSICALLY HANDICAPPED

Contributed by

Nadine Pitts, Director

Division of Public Health Education

Who are Alabama's physically handicapped people? They are all kinds—the man next door, the boy a few houses down the street, the woman who lives across town, the girl in the small community a few miles away. The man is an amputee—he lost a leg on a battlefield in World War II. Handicapped from birth, the boy you see almost every day has a congenital club left foot. The girl in the next town looks well enough, but she, too, is handicapped. The bout she had with rheumatic fever at an early age did permanent damage to her heart. And the woman who lives across town? She sustained complex injuries in an automobile accident. It may not be obvious to a stranger, but her friends are conscious of her limp right hand. They also know that she could not return to the office job she held before the accident.

Thus, physically handicapped Alabamians are victims of a variety of disabling illnesses and injuries. But no matter how serious the handicaps appear, all the members of the group have one characteristic in common: they have a certain ability to be productive, to achieve. True enough, the ability is extremely limited in some instances.

We have not always realized the dormant potentialities of the physically handicapped. Not only were we not aware of them, but we failed to recognize the role communities, in fact everyone, can play to aid in the development of these potentialities.

It is often hard to say or know where a new idea or approach to a problem starts. Especially is this true if the problem is like that of the handicapped—one of long standing, of great magnitude and one which involves large numbers of people. But the good news for the physically handicapped today is that they are benefiting from a new

approach to their problems. The new approach is perhaps not yet a universal one but it is being practiced and adopted more and more.

Physically handicapped Alabamians are today, then, more than ever before, recognized as a group which deserves community support and help. But it has not always been so. The years and the centuries preceding our time had a goodly share of handicapped people, also. However, in the vast majority of cases, communities offered no organized aid. The help the handicapped received, if any, came only from family and friends.

Thus, we have come a long way to arrive at the beginnings of this new approach. There are many reasons why. Outstanding among them is the actual performance of the handicapped. Their personal achievements have been many and their personal determination strong. The name of the French scientist Louis Pasteur is familiar to most people, or, if not, another word pasteurization, taken from his name, is. But it might be news to many people that this man, one of the great scientists of all time, was handicapped. He was semiparalyzed, and he lived in constant dread of apoplexy, which his doctors said was sure to overtake him. In fact, many people told him he was "through." And fortunately for us today, he was no longer able to continue in his then present job—as a drug salesman! Instead, despite his disabling illness, he went on to an eminently greater personal and humanitarian achievement. He gave to his and succeeding generations the discovery of preventive inoculations, especially against rabies, to combat diseases.

There are many "success" stories comparable to Pasteur's. Although the achievements of many handicapped persons may not rank with his in worldwide application, they are equal in another way: they were attained despite tremendous odds and obstacles.

What is the evidence that Alabama and the nation are doing more for the disabled? The signs are everywhere. The United States Congress, for instance, has greatly in-

creased the money appropriated to states to aid in carrying on their work of vocational rehabilitation for the handicapped. With this additional financial aid it is expected that by the year 1959 a total of 200,000 handicapped persons can be rehabilitated each year. This compares with 60,000 rehabilitated each year at the present time.

In the same Congressional session, the nation's representatives also acted to better another situation which relates to the handicapped. Many rehabilitation services suffer or bog down in midstream because there is a shortage of the specialized personnel—the physicians, the therapists, counselors and others—needed to carry them out. Thus, Congress in 1954 authorized the Department of Health, Education and Welfare to conduct a program to provide more of these specially trained people.

In addition, Congress passed legislation which makes possible federal financial aid for constructing a type of medical facility designed especially for the disabled. Some communities can now construct vocational rehabilitation centers with federal money aid. Alabama stands to gain greatly from this legislation since there is, at the present time, only one such center in operation in the state. Such centers are organizations for coordinating all the community's rehabilitation facilities and processes. They function to move the disabled person as far as possible along the road from the hospital bed to productive activity or employment.

In Alabama, the State Office of Vocational Rehabilitation keeps a check on the number of persons rehabilitated each year. What do their records show? In the latest fiscal year, from October 1, 1954 to September 30, 1955, a total of 1,960 persons had been fitted to return to their old jobs or to new ones. Thus, while the state ranks seventeenth in population, it ranks eighth among the 48 states in the number of disabled persons rehabilitated to successful employment.

How did these 1,960 Alabamians become qualified for reemployment; how did they find themselves no longer dependent on public or private charity? Their rehabilitation involved many factors. The adult patient, for instance, who has suffered a disability must make some adjustments. First of all, the disability imposes realistic limitations on his actions, and he has to be helped, oftentimes, to realize or understand what

these limitations are. Also involved are adjustments he must make in his relations with other people, to his work, and even the way he thinks about himself.

Meanwhile, many of these persons benefited from special training services provided by the Alabama Office of Vocational Rehabilitation. At the latest count, there were 4,412 such individuals receiving such services.

One or more of these persons, for example, was probably blind. Such persons need to be trained to make the most of latent abilities. They will need to learn certain techniques of travel, personal care, and other phases of ordinary living.

The Public Affairs Pamphlet "Doing Something For The Disabled" gives us an example of a disabled person and how he was rehabilitated. Although this person lived elsewhere, a similar situation might have occurred in Alabama. And his case serves to demonstrate how someone who might be dependent on others is rehabilitated to become productive within his limitations. The authors call the man George Davis, a 23-year-old tractor driver for a packing firm. He had a family, but also a "bad hip" which he had had since the age of three. However, it had not bothered him so much until now. When the pain became too much to bear, George realized that he could not stay on the job. One of the nurses who worked for the packing firm gave him some medicine for the pain, as well as some good advice. She told him that there were other jobs he could do besides wheeling a tractor, and that the local vocational rehabilitation agency could probably help him.

Specialists at the agency determined several things about George Davis. First of all, tests revealed that there were many jobs he could do well, jobs that did not require walking, climbing, bending, and stooping—the actions that made his hip hurt. Also, after a complete medical examination, a surgeon recommended an operation that would stop the pain, but one that would at the same time restrict his activity. George underwent the recommended surgery, and while he was convalescing, he had time to think about his future.

The three basic ground rules which applied to George as well as to other disabled persons were what he wanted to do, what he could do, and where he could obtain the

training which might be necessary for him to qualify for the job he wanted. All the conditions were favorable to his choice: he decided to become a linotype operator or a printer.

Provisions were made by the rehabilitation agency for him to take a training course after he left the hospital. And with the financial aid which another agency gave him and his family, George Davis' story had a good ending. He was able to obtain a job as a linotype operator on a small newspaper. He still has a disability, in fact one that he will always have, but it does not stand in the way of his chance to make a living for himself and his family.

One Tennessee town has set an example of rehabilitating the disabled and putting them to work. In Knoxville many prospective employers had never "heard of a draftsman with only one finger on each hand." But they have now. Just such a person is now employed in that town, and he is doing a good job with his technical drawing. Another young woman there is partially paralyzed, but that does not deter her from performing well as a stenographer. There are many other such cases as a result of "Operation Knoxville," as recounted in the February 1955 issue of *Today's Health*, published by the American Medical Association. The author of that article calls Knoxville's experiment in rehabilitation an example which "points the way for all communities to save human dignity, manpower and tax dollars."

Knoxville's successful program was the work of more than a few individuals and city officials. The key to its success lay in the cooperation of all the town's citizens. There were the employers who had to be anxious to see that disabled workers got an equal chance. Leaders of the local medical society and health department saw to it that health services were available. And labor unions were called upon for suggestions for meeting work needs of the handicapped. Moreover, some 25 community social agencies worked together, offering valuable services which contributed to the total rehabilitation of the handicapped person.

A Minnesota doctor writing in a recent issue of *Journal Lancet* points to two freedoms for the handicapped citizen. These are freedom from disability and freedom to progress toward opportunities equal to those of his able-bodied neighbor. In

this doctor's opinion, these freedoms can best be assured and his rehabilitation can best be accomplished by group effort put forth by physicians and auxiliary health workers. Such medical teams, he believes, can, in adequately staffed institutions, bring about the maximum physical and mental rehabilitation. Then, social workers, educators and others must step in to assist in achieving the utmost in social and vocational adjustment of the disadvantaged handicapped and his environment.

We have only begun to "scratch the surface," realistically speaking, where rehabilitating the physically handicapped is concerned. In addition to the backlog of the disabled persons needing services, an estimated 250,000 individuals in the nation are handicapped each year by disabling injury or chronic illness. But the community approach and the great demand that the needs of this group be met are encouraging signs that great strides can be made in rehabilitation in the years just ahead.

New Method For Aorta Surgery Described— When the aorta, the main trunk of the circulatory system, needs surgery, physicians face the problem of performing the operation without cutting off circulation.

The problem is especially difficult in the arch and descending aorta, the parts lying in the chest, for "irrevocable damage" to the spinal cord may occur if the blood flow is shut off too long.

However, a Boston physician, Dr. Herbert D. Adams, reported in the November 19 *Journal of the American Medical Association* that he successfully performed two operations on the thoracic aorta without once stopping the flow of blood. He used a method already found successful in operations on the abdominal aorta. Both operations were for the removal of aneurysms.

In his operations, Dr. Adams used an aortic graft, which he inserted as a shunt or by-pass around the aneurysm. While the graft was being inserted, the blood continued to flow through the aorta. After the shunt was in place and the blood was flowing through it, the aorta was clamped shut and the aneurysm removed.

In one of the cases, involving a "huge" aneurysm, the two ends of the aorta were closed and the shunt left as the permanent passage for the blood. In the other case, a second graft was placed between the ends of the aorta as a replacement for the diseased portion and the shunt removed. In both cases the grafts functioned successfully, Dr. Adams said.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

October 1955

Examinations for diphtheria bacilli and Vincent's	697
Agglutination tests	673
Typhoid cultures (blood, feces and urine)	629
Brucella cultures	4
Examinations for malaria	89
Examinations for intestinal parasites	2,722
Darkfield examinations	3
Serologic tests for syphilis (blood and spinal fluid)	25,246
Examinations for gonococci	1,373
Examinations for tubercle bacilli	3,113
Examinations for Negri bodies	58
Water examinations	1,761
Milk and dairy products examinations	5,151
Miscellaneous examinations	479
Total	41,998

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director
CURRENT MORBIDITY STATISTICS

1955

	Sept.	Oct.	E. E.* Oct.
Typhoid and paratyphoid fever ..	4	7	4
Undulant fever	0	2	2
Meningitis	2	6	6
Scarlet fever	31	61	64
Whooping cough	91	79	36
Diphtheria	33	58	59
Tetanus	5	1	4
Tuberculosis	221	253	233
Tularemia	0	0	1
Amebic dysentery	0	1	2
Malaria	0	0	15
Influenza	43	211	69
Smallpox	0	0	0
Measles	9	26	35
Poliomyelitis	24	25	30
Encephalitis	4	1	0
Chickenpox	3	8	13
Typhus fever	3	3	8
Mumps	40	54	22
Cancer	454	644	359
Pellagra	1	1	3
Pneumonia	112	194	108
Syphilis	104	190	485
Chancroid	0	5	14
Gonorrhea	269	395	555
Rabies—Human cases	0	0	0
Positive animal heads	19	18	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR AUGUST 1955

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During August 1955			Rates (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	7692	4625	3067	28.0	28.0	29.2
Deaths	2212	1349	863	8.0	7.2	7.6
Fetal deaths	210	98	112	28.0	23.6	22.7
Infant deaths— under one month	174	85	89	22.6	23.0	24.3
under one year	223	106	117	29.0	29.1	30.6
Causes of Death						
Tuberculosis, 001-019	37	15	22	13.4	9.9	10.8
Syphilis, 020-029	5	1	4	1.8	1.5	1.9
Dysentery, 045-048	2	1	1	0.7	1.1	1.1
Diphtheria, 055	1		1	0.4	0.7	0.4
Whooping cough, 056						
Meningococcal infections, 057	1	1		0.4		
Poliomyelitis, 080, 081	2	2		0.7	2.6	2.6
Measles, 085					0.4	
Malignant neoplasms, 140-205	313	219	94	113.7	91.5	94.3
Diabetes mellitus, 260	31	20	11	11.3	5.8	10.4
Pellagra, 281					0.7	
Vascular lesions of central nervous system, 330-334	270	157	113	98.1	85.2	92.1
Rheumatic fever, 400-402	3	2	1	1.1	0.4	1.1
Diseases of the heart, 410-443	714	477	237	259.5	220.0	207.4
Hypertension with heart disease, 440-443	143	68	75	52.0	50.3	47.2
Diseases of the arteries, 450-456	47	31	16	17.1	12.5	16.0
Influenza, 480-483	1	1		0.4		1.1
Pneumonia, all forms, 490-493	53	34	19	19.3	19.4	14.8
Bronchitis, 500-502					1.1	1.1
Appendicitis, 550-553	2	2		0.7	2.6	1.9
Intestinal obstruction and hernia, 560, 561, 570	5	5		1.8	4.0	4.1
Gastro-enteritis and colitis, under 2, 571.0, 764	14	4	10	5.1	4.8	6.7
Cirrhosis of liver, 581	13	12	1	4.7	3.3	5.2
Diseases of pregnancy and childbirth, 640-689	7		7	8.9	14.1	16.1
Congenital malformations, 750-759	31	19	12	4.0	3.0	2.9
Accidents, total, 800-962	159	101	58	57.8	51.1	56.8
Motor vehicle accidents, 810-835, 960	69	44	25	25.1	25.0	30.4
All other defined causes	412	211	201	149.7	163.2	164.1
Ill-defined and unknown causes, 780-793, 795	89	34	55	32.3	25.7	31.6

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

WIDE-SCALE CANCER SURVEY REPORTED

The largest cancer survey ever conducted in any country has been completed in 10 American metropolitan areas by the National Cancer Institute.

The survey, reported in the December 24 *Journal of the American Medical Association*, showed that "some progress" has been made in the management of the cancer problem.

There was a rise in incidence from 1937 to 1947, but it is difficult to determine the significance of this or to tell how much of the rise is "real," the report said.

"Improved techniques for diagnosis have resulted in the discovery of some cases that in the past would have been missed. The number of physicians with training and experience in diagnosis of cancer has also increased. Improved economic conditions in 1947 compared to 1937 may also have contributed. People are more likely to obtain adequate and specialized medical care during economic prosperity than during a depression period," the report said.

Cancer incidence, prevalence, and mortality rates were surveyed in 1937-39 and 1947-48 in Chicago, Detroit, Philadelphia, Pittsburgh, Atlanta, New Orleans, Dallas, Denver, San Francisco, and Birmingham, Ala.

The survey was on "a scale unrivaled in any other country" and could not have been undertaken without the support of state and county medical societies, the report said. Thousands of physicians contributed information concerning their patients.

"It is heartening to realize that such studies may be undertaken within the framework of the American system of medical care without breaching the traditional physician-patient relationship," the report said.

The survey showed that in 1947, 430 of every 100,000 residents had cancer at some time during the year—26 per cent more than in 1937, and 149 of every 100,000 died of cancer—an increase of 19 per cent. In 1947, 319 new cases were diagnosed for every 100,000 persons—30 per cent more than in 1937.

The survey also revealed that:

—Thirty-two of every 100 newborn children may expect to develop cancer at some time during their lives, if present rates continue.

—Of those 32, three may be expected to develop cancer by age 45, 14 by age 65, 23 by age 75, and the remainder in after years.

—More than 500,000 new cases are being diagnosed in the United States each year. At current rates, cases may be expected to increase by more than 50 per cent in the next 25 years, since both total population and the proportion of older persons are expected to increase.

—Cancer illness rates increase rapidly during adult life and old age—at rates of about 40 per 100,000 at age 25; 475 per 100,000 at 50, and 1,900 per 100,000 at 75.

—Adjusting for age difference, cancer is discovered at the same rate among men and women (331 and 330 per 100,000).

—The death rate is higher for men than women (169 against 147 per 100,000). This is due mainly to the fact that cancer in men originates more frequently in such sites as stomach and lungs, with poor chances for recovery.

—In men the risk of cancer of the digestive system is dominant, with a lifetime probability of 10.3 per 100.

—In women the risk of cancer before 65 is highest in the reproductive organs—a rate of 7.2 for the genital organs and 7.5 for the breast per 100. After 65, the risk is greatest in the digestive system.

—Nearly all forms, except cancer of the reproductive organs, occur more frequently among men.

—Cancer of the lung and bronchus occurs four and one-half times more among men than women. The laryngeal cancer rate is 12 times greater.

—Incidence and mortality for cancer of the lung and bronchus more than doubled from 1937 to 1947. This may be due partially to improved case finding, but part of the rise is real.

—In 1947 cancer was diagnosed at a rate of 272 per 100,000 among nonwhite persons, compared to a rate of 333 for whites. Skin cancer is relatively rare among nonwhites,

while among white persons the skin accounts for one in seven cancers. The low nonwhite rate is generally considered to result from "a true racial difference in susceptibility."

—From 1937 to 1947 the number of cancer patients seen in hospitals increased 7 per cent—from 68 to 73 per 100 patients.

Making the report were John R. Heller, M. D., Sidney J. Cutler, M. A., and William M. Haenszel, M. A., Bethesda, Md., of the National Cancer Institute of the U. S. Public Health Service, Department of Health, Education, and Welfare.

PHYSICIANS REPORT USE OF NEW SYNTHETIC HORMONE

A preliminary report on the use of a new synthetic hormone to make up for hormone gland activity lost through disease or surgery has been made by two Ohio physicians.

The hormone, fludrocortisone acetate, appears to be 15 to 20 times as effective as hydrocortisone, another synthetic now used for such conditions.

The greatest usefulness of fludrocortisone probably will be in adrenal insufficiency and in cases of surgical removal of the glands in cancer or other serious illnesses, they said.

The physicians, who made their report in the December 24 Journal of the American Medical Association, gave the hormone to patients with a variety of disorders, including a serious nervous condition characterized by loss of appetite, an eye disease, rheumatoid arthritis, and adrenal cortical hypofunction.

The hormone is similar to cortisone and hydrocortisone in its ability to inhibit the pituitary stimulation of the adrenal gland; produce loss of nitrogen, calcium, and phosphorus; inhibit inflammation, and produce a sense of well being.

It also resembles desoxycorticosterone, another synthetic hormone, in its effect on salt, water, and potassium balance. However, its use may be limited in conditions such as rheumatoid arthritis, in which it causes too much salt and water retention, they said.

The report was made by Drs. George J. Hamwi and Robert F. Goldberg, from the division of endocrinology and metabolism, department of medicine, Ohio State University, Columbus, Ohio.

The study was supported by grants from the Comly-Coleman Fund, the Institute of

Nutrition of Ohio State University, and Merck & Company, Inc., Rahway, N. J.

PLACEBOS MAY PRODUCE HARMFUL SIDE EFFECTS

Placebos may produce beneficial effects like those of the real thing, but they also may cause harmful side effects, according to a Boston physician.

A placebo is an inactive substance or preparation which is given under certain circumstances to please or pacify a patient. It also is used as a "dummy" for comparison with real medicines in certain investigations.

Dr. Henry K. Beecher surveyed 15 studies, involving more than 1,000 patients, in which placebos were used. His report appears in the December 24 Journal of the American Medical Association.

The placebos produced "real improvement" in a wide variety of difficulties including wound pain, pain of angina pectoris, headache, nausea, effects related to cough and to drug-induced mood changes, anxiety, tension, and the common cold—all ailments with strong subjective responses.

The placebos also produced such side effects as dry mouth, nausea, sensation of heaviness, headache, difficulty in concentrating, drowsiness, warm glow, relaxation, fatigue, sleepiness, skin rash, and abdominal pain.

It is doubtful that the placebos, usually made of salt, starch, or lactose, chemically produced these effects, he said. Rather it appears that the physical change was associated with a psychological reaction to suffering.

Dr. Beecher said that the severer the disease state the greater is the effect of placebos, both in giving relief to pain and in producing side effects.

Decided improvement, interpreted as real therapeutic effect, occurred in approximately 35 per cent of the patients given placebos in each of the studies. The relative constancy of the placebo effect suggests that "a fundamental mechanism" is operating in all these patients, one that deserves more study, Dr. Beecher said.

He noted that use and study of placebos offer "much of practical value," particularly in the understanding of certain basic problems in the action of narcotics and similar substances.

Dr. Beecher is from the anesthesia laboratory of the Harvard Medical School at the Massachusetts General Hospital.

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ULCERATIVE COLITIS

REVIEW OF LITERATURE AND CASE REPORTS

JOHN L. CARMICHAEL, M. D.

Birmingham, Alabama

Wilks, as early as 1859, had expressed the opinion that the word "dysentery" did not cover all types of colon ulceration.¹ He and Moxon² are generally credited with describing, in 1875, the condition we now know as idiopathic ulcerative colitis. In the intervening years much has been learned about the character and course of the disease and many procedures have been proposed for its treatment. The etiology, however, is still obscure.

It has been thought by some³ that this condition is caused by the presence of excessive amounts of trypsin in the colon, either as a result of increased production or as a result of rapid transport by a hyperactive small bowel. However, there seems to be no evidence of increased activity of the pancreas⁴ in the disease. Also in opposition to this theory are experiments⁵ that indicate that the drainage from the ileostomy in ulcerative colitis exhibits no greater tryptic activity than does the drainage from the ileostomy of the colonic cancer case. However, the authors were not fully satisfied with their experiments since the ileostomies in ulcerative colitis were of long

duration, whereas in the cancer cases they were of short duration.

It has been proposed also⁵ that there is an antiproteolytic substance in the normal colon and that the absence of this in the case of ulcerative colitis leads to the ulceration. On the basis of this theory, extract from hogs' stomach has been used with the idea of protecting the mucosa of the colon. Although the work of Erhlich on 24 cases seemed to support this theory, confirmation from others is lacking.

Gill⁶ suggested that there is a deficiency of some substance which the administration of duodenal extract would correct. He thought he had obtained improvement by administering duodenal extract. Similar treatments, however, administered by others^{7,8,9,10} have given poor results.

The allergists also have made their studies of the problem. Rowe,¹¹ among the more optimistic ones, concludes that an eczema-

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9. Kirsner, Joseph B.: Discussion, *Gastroenterology* 15: 282, 1950.

10. Kiefer, Everitt D.: Discussion, *Gastroenterology* 15: 283, 1950.

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tous-like inflammatory reaction to food, and less often to pollen and other inhaled antigens and drugs, explains the pathology.

Several bacteria and protozoa have been blamed for the condition, chiefly the bacillus of dysentery and the enterococcus described by Bargaen. Although infection does, no doubt, play an important role, it seems that no specific organism is primarily responsible for the condition. None certainly has satisfied the postulates of Koch to the satisfaction of any great number of those who have studied the disease.

The lysozyme theory, also, has been popular with some students. Lysozyme¹² is a mucolytic and bacteriolytic enzyme or group of enzymes first found in egg whites by Fleming and also in human tears and other secretions. It is a crystallizable basic protein of relatively low molecular weight. It can be titrated by determining the reduction of viscosity it causes in certain mucoid material. It is of no value as an antibiotic since its effect is limited to certain groups of saprophytes.

Wang¹³ and associates, by experiments on rats, found that lysozyme produces erosions and hemorrhages in the colonic mucosa of rats and increases the injurious action of hydrochloric acid and pepsin in vivo. However, lysozyme does not decrease the viscosity of gastric mucus nor does it cause disintegration of surface epithelial cells suspended in mucus. These authors state that the mechanism of the enzyme action of lysozyme has not been satisfactorily explained.

Most students, it seems, have concluded that lysozyme has little if any causal relationship to ulcerative colitis. All workers, however, appear to agree that the titer of lysozyme is much higher in colonic content in the diseased bowel than in the normal bowel. This titer, according to Gray et al.,¹⁴ seems to decrease as the disease becomes more quiescent and to increase as the disease becomes more active. Thus it is

thought to be a good index of the activity of the disease. Gurling¹⁵ states that in severe exacerbation of the disease the titer may be 50 times normal.

Prudden,¹⁶ summarizing the work of himself and associates, states that the mean daily output of lysozyme in chronic ulcerative colitis is 168 times the normal output. The explanation of this may be the fact that lysozyme is present in inflammatory conditions and in granulation tissue. Moeller¹⁷ found that large amounts of lysozyme were secreted locally following the cauterization of the rectal mucosa in dogs.

It has also been found that significant amounts of lysozyme are secreted by normal mucosal cells and that this secretion is partially, at least, under nervous control. Meyer et al.¹⁸ found that the administration of mecholyl increases this secretion. They found also that the gastric secretion of lysozyme was reduced by 44 per cent by vagotomy.

Psychiatrists and internists have found that psychic factors appear to play an important etiologic role. Mahoney and Bockus¹⁹ state that patients suffering with ulcerative colitis are complex neurotics in whose early life there were major parent-child relationship disturbances and other traumatic experiences. The personality studies do not reveal the reason for the localization of the pathophysiologic process in the colon. Some of the experimental work does, however, throw some light on this problem. Grace,²⁰ in a study of four fistulous cases in which there was a prolapsed colon, found in the experiments that the two with ulcerative colitis displayed more frequent and more sustained changes

15. Gurling, K.: Combined Staff Clinics. Ulcerative Colitis, *Am. J. Med.* 6: 481, 1949.

16. Prudden, John F.: Combined Staff Clinics. Ulcerative Colitis, *Am. J. Med.* 6: 481, 1949.

17. Moeller, H. C.; Marshall, H. C., & Kirsner, J. B.: Lysozyme Production in Response to Injury of Gastrointestinal Tract in Hogs, *Proc. Soc. Exper. Biol. & Med.* 76: 159-161, 1951.

18. Meyer, K.; Prudden, J. F.; Lehman, W. L., & Stenberg, A.: Lysozyme Activity in Ulcerative Alimentary Disease; Lysozyme in Peptic Ulcer, *Am. J. Med.* 5: 482-495, 1948.

19. Mahoney, V. P., et al.: Personality in Relation to Ulcerative Colitis, *Gastroenterology* 13: 547-563, 1949.

20. Grace, W. J.: Life Situations, Emotions and Chronic Ulcerative Colitis, *A. Research Nerv. & Ment. Dis., Proc.* (1949) 29: 679-691, 1950.

12. Editorial, *Ann. Int. Med.* 37: 813, 1952.

13. Wang, K. J.; Grant, R.; Janowitz, H. D., & Grossman, M. I.: Action of Lysozyme on Gastrointestinal Mucosa, *Arch. Path.* 49: 298-306, 1950.

14. Gray, S. J.; Reifstein, R. W.; Benson, J. A., Jr., & Young, J. C. G.: Treatment of Colitis and Regional Enteritis with ACTH (Adrenocorticotrophic Hormone); Significance of Fecal Lysozyme, *A. M. A. Arch. Int. Med.* 87: 646-662, 1951.

in colonic function than did the other subjects. Overwhelming life situations provocative of abject fear and dejection were associated with hypofunction of most of the large intestine, with pallor and relaxation and low concentration of lysozyme. On the other hand, life situations provocative of conflict, with feelings of anger, resentment and hostility, or of anxiety and apprehension, were found to be associated with hyperfunction of the colon manifested by contractile activity. He found that mucosal erosions and ulcerations occurred in those with ulcerative colitis during periods of sustained conflict and feelings of hostility and frustration. These lesions receded during periods relatively free of serious conflict.

Experimental work has been done to find the pathways by which psychic disturbance might affect the physiology of the colon. The conventional conception that the sympathetics inhibit the motility and that the parasympathetics increase the motility has been brought into question. Schlitt²¹ found that neither sacroparasympathectomy nor vagotomy produced detectable changes in either the basic colonic motility or in the response of the colon to external stimuli such as pain and hunger. It was only after both sympathectomy and parasympathectomy were done that different wave patterns were noted.

It has been thought that hormone deficiency may be an etiologic factor. Machella²² states that the finding of a decrease of the urinary 17-ketosteroids in patients with the disease has led to the suggestion that adrenal failure may be a causative factor. Support of this theory comes from the splendid response to cortisone in some cases. The better response to adrenocorticotrophic hormone, however, would suggest a pituitary rather than an adrenal failure.

Levine²³ and associates have found degenerative changes in the basement membrane of the bowel mucosa which they

think relate it to the collagen diseases.

With the consideration of these various etiologic data, one comes to feel that there is a disturbance more basic than infection or than isolated enzyme or hormone deficiency and that the true etiology may be a complex of many factors.

The pathologic picture is chiefly one of acute or chronic inflammation with ulceration, fibroplasia and polypoid formations.

The⁸ incidence, according to Gurling,¹⁵ is greatest in the years from 20 to 40, although both young and old may be affected.

The diagnosis is made by the history and by proctologic examination and x-ray. The history and proctologic examination are by far the most important. The x-ray is helpful in only about two-thirds of the cases. Palmer et al.²⁴ state that the rectum is involved in about 95 per cent of the cases and the pathognomonic sign is a diffusely granular, friable, and edematous rectal mucosa. It is important to rule out, by the appropriate examination, bacillary and amebic dysentery, tuberculous colitis, regional enteritis, lymphopathia venereum and neoplasm.

As one would expect from a review of the literature in regard to the etiology of the disease, there is a voluminous literature on its treatment. In a disease also that has spontaneous remissions such as ulcerative colitis the evaluation of the treatment is difficult.

Gill⁶ has observed symptomatic improvement when he administered raw pig intestine or a desiccated, defatted mucosal preparation. However, reports on such therapy have been discouraging.

The allergists have excluded foods to which the patients were found to be sensitive and have produced apparently significant relapses.

Meyer and Prudden²⁵ administered 540 mg. of sodium hexadecyl sulfate every four hours for its antiproteolytic effect in 11 cases of active colitis and noted a remission in seven and improvement in two.

Many of the antibiotics and sulfonamides

21. Schlitt, R. J.; McNally, J. J., & Hinton, J. W.: Response of Distal Colon to External Stimuli; in Relation to Autonomic Nerve Section for Ulcerative Colitis, Surg., Gynec. & Obst. 92: 223-230, 1951.

22. Machella, T. E.: Problems in Ulcerative Colitis, Am. J. Med. 13: 760-776, 1952.

23. Levine, M. D.; Kirsner, J. B., & Klotz, A. P.: New Concept of Pathogenesis of Ulcerative Colitis, Science 114: 552-558, 1951.

24. Palmer, W. L.; Kirsner, J. B., & Marshall, H. C., Jr.: Therapeutic Considerations in Chronic Ulcerative Colitis, Ann. Int. Med. 32: 627-639, 1950.

25. Meyer, K., & Prudden, J. F.: Combined Staff Clinics. Am. J. Med. 6: 484, 1949.

have been used. They seem to exert some beneficial influence but this is usually for only a short time. Among sulfonamides, probably sulfasuxadine or sulfathaladine is best. Of the antibiotics, aureomycin^{26,27} seems to be the most effective. As one would expect if one considers the infection to be secondary to some more basic cause, the improvement proceeds to a certain point; then, as if the bacteria adjust themselves to the agent used, the improvement stops. Even the improvement that has been gained may be lost.

Psychotherapy has apparently produced good results at times. Certainly, psychotherapy is an important adjunct to any form of treatment used in the management of ulcerative colitis.

Adrenocorticotrophic hormone and cortisone have been used with gratifying effect in some instances. In fact, most of the early cases will improve rapidly. This is so universally true that Lahey²⁸ has stated that, in an encouraging number of patients, one need not now operate on ulcerative colitis in the acute stage. Adrenocorticotrophic hormone seems to be the better of the two. However, as with other therapy, the good effect is usually fleeting. There is also real danger of perforation of the bowel, and in one case the surgeon²⁹ reported that the colon literally fell apart when colectomy was done. Gray³⁰ and associates conclude that the administration of adrenocorticotrophic hormone does not accomplish a cure but is a valuable adjunct in the therapy of ulcerative colitis.

Bates² estimates that about 60 to 90 per cent of the cases of ulcerative colitis are treated medically. He estimates that 50 per cent of those continued under good med-

ical management remain as disabled persons and, although surgery is reserved only for the patients with complications, 70 to 95 per cent have shown full rehabilitation.

Pregnancy in ulcerative colitis poses special problems. Machella²² found that in 32 pregnancies, beginning in an inactive phase, the colitis was reactivated in 43.7 per cent. In a group of 88 cases in which pregnancy occurred during the active phase, 36.3 per cent improved, 50 per cent became worse, and 13.6 per cent were not influenced by it. Eighty-three per cent of 136 pregnancies went to full term. Tending to confirm the psychosomatic nature of the disease is the fact that those who welcome pregnancy improve during the gestation and those who do not welcome it do poorly. Abramson³¹ and associates, on the basis of their experiences with 46 gestations in 33 patients, recommend abortion in the first trimester in severe cases.

There are many complications of this disease. Among these are massive hemorrhage, perforation, stricture with obstruction, perirectal abscess and fistula, arthritis, erythema nodosum, and necrotizing skin ulcers. There are little or no changes in other viscera that can be considered specific for ulcerative colitis.

The occurrence of cancer in ulcerative colitis has caused much discussion. Machella¹⁶ reports an incidence of 3 per cent in a series of 6890 cases collected from the literature. Sloan³² and associates, reporting on 2000 cases from the Mayo Clinic, state there is presumptive evidence of cancer in 5 per cent of the cases but they think the true incidence is much higher. The longer the disease has existed, the higher the rate of cancer; and the earlier the age of onset, the more likely cancer is to develop.

The complications calling for surgery, as outlined by Bates,² are first the emergencies, which include acute fulminating diseases, massive hemorrhages, acute perforation, impending perforation, and obstruction. The complications calling for elective surgery are intractable disease, pseudopoly-

26. Wright, L. T.; Starx, S., & Marks, J. A.: Treatment of Nonspecific Colitis with Aureomycin, *Ann. West. Med. & Surg.* 4: 717-725, 1950.

27. Streicher, M. H., & Kniering, R.: Chronic Ulcerative Colitis; Clinical and Bacteriologic Response to Aureomycin, *Am. J. Digest. Dis.* 18: 231-234, 1951.

28. Lahey, F. H.: Indication for Surgical Intervention in Ulcerative Colitis, *Ann. Surg.* 133: 726-742, 1951.

29. Larkin, M. A., & Flannery, M. G.: Surgical Experience with Corticotropin in Ulcerative Colitis, *A. M. A. Arch. Surg.* 66: 386-387, 1953.

30. Gray, S. J.; Reifstein, R. W., & Benson, J. A., Jr.: ACTH Therapy in Ulcerative Colitis and Regional Enteritis, *New England J. Med.* 245: 481-487, 1951.

31. Abramson, D., Jankelson, I. R., & Milner, L. R.: Pregnancy in Idiopathic Ulcerative Colitis, *Am. J. Obst. & Gynec.* 61: 121-129, 1951.

32. Sloan, W. P., Jr.; Barger, J. A., & Gage, R. P.: Symposium on Diseases of Colon; Life Histories of Patients with Chronic Ulcerative Colitis; Review of 2,000 Cases, *Gastroenterology* 16: 25-38, 1950.

posis, severe local complications such as abscesses and fistulae, systemic complications, and segmental disease. Others have suggested that the onset of arthritic pain or of erythema nodosum is an indication for surgery.

Surgery now usually means ileostomy and total colectomy. In former years, surgery was used chiefly as an adjunct to medical treatment. Vagotomy has more recently been used in the early cases, somewhat as an adjunct to medical treatment, but the preferred treatment now, when surgery is indicated, is total extirpation of the diseased colon and as much of the ileum as may be involved. This may be done in a one-stage procedure with ileostomy and total colectomy, including the rectum and anus. Again, it may be done as an ileostomy, with a total colectomy later, or as an ileostomy with partial colectomy and subsequent resection of the remaining colon. The one-stage procedure has been preferred by many in recent years.

The development of a successful ileostomy bag, the improvement in the technics of surgery and anesthesia, and the use of sulfonamides and antibiotics have made this radical surgery possible and desirable.

Bates² writes that the mortality under good medical management should not exceed 10 per cent and that the total surgical mortality should not exceed 10 per cent, even though the surgical group is made up of the more advanced cases with complications.

The following three cases will illustrate the surgical treatment of ulcerative colitis.

REPORT OF CASES

Case 1: Miss M. R., Jefferson Hillman No. B-22085, age 23, white female telephone operator, was admitted to the hospital on May 15, 1950 with the history of numerous daily stools containing blood and mucus over a period of 2 or 3 weeks. A weight loss of seven pounds had been noted by the patient. Examination of stools was repeatedly negative for pathogenic bacteria and organisms. Proctoscopic examination revealed an edematous mucosa which bled easily with slight irritation. She was treated medically during this hospital admission with slight improvement. The patient continued to pass loose stools with blood and mucus. Weight loss continued. She was readmitted to the hospital where she received vigorous medical treatment with little or no improve-

ment. After this period of hospitalization she was treated elsewhere for several months with little improvement.

A summary of the laboratory data and medication is given below:

	Red Count	Hb.	White Count
May 16, '50	4.44M	57%	8.6
May 29, '50	4.39	84	9.2
July 18, '50	4.15	61	13.3
July 22, '50	2.91	45	9.7
July 28, '50	3.55	58	8.8
Aug. 4, '50	4.18	78	7.6
Aug. 11, '50	4.18	97	8.5
Jan. 18, '51	3.49	46	6.1
Jan. 29, '51		71	7.6
Sept. 23, '51	4.12	75	8.8

Several stools were negative for ameba and for the dysentery bacillus.

Treatment: Total hospital days 75.

Sulfonamides—27 days

Aureomycin and Terramycin—31 days

Emetine Carbarson—4 days

ACTH and Cortisone—19 days

Banthine—22 days

Liver vitamin—Daily

Blood, excl. of surgery—5000 cc.

An ileostomy was performed in January 1951 with an uncomplicated postoperative course. Blood and mucus continued to pass from the rectum, however, and a one-stage total colectomy was performed eight months after the ileostomy was established. Her colon, in all essential respects, resembled the one removed from the second case and pictured in Figure 4. She made a rapid postoperative recovery. She gained about 20 pounds, and in the course of a month resumed her former work. Her health has remained good until this date (December 1955) and she has worked regularly since resuming her old job. Figures 1, 2, and 3



Fig. 1. Case 1. Showing ileostomy with normal surrounding skin.



Fig. 2. Case 1. Showing Rutzen bag in place.

are photographs of the stoma of the ileostomy, the ileostomy sealed off with the Rutzen bag, and the patient fully dressed with the bag in place. The skin around the ileostomy, as can be observed, has remained in good condition. The bags are changed twice daily and require no care in the interval between changes. No enemas are necessary. There are no uncontrolled gases and, in general, the care of the ileostomy is as easy as that of a colostomy and in some respects more satisfactory. It is the development of such bags, with air-tight sealing to the skin, that has made ileostomy an accepted and very useful procedure, not only in ulcerative colitis but in other surgical conditions requiring total colectomy.

The record of the second case follows:

Case 2: Mr. L. R., St. Vincent's No. 13558, Jefferson No. 46016, age 47, white male railway clerk, was admitted to the hospital on October 10, 1952 with the history of passage of 4 to 8 stools daily for the past 10 days. These were mixed with blood and mucus. Weight loss, anorexia, malaise and fever had been noticed by the patient. Proctoscopic examination revealed a congested mucosa which bled easily. Examination of numerous stool specimens did not reveal any pathogenic bacteria or organisms. The patient was treated medically during this hospital admission with minimal improvement. He continued to have numerous loose stools after discharge from the hospital and he was readmitted on November 19, 1952. At this time an ileostomy was done.

A summary of the laboratory findings and of the medications given follows:



Fig. 3. Case 1. Showing patient fully dressed with ileostomy bag in place.

	Red Count	Hb.	White Count
Oct. 10, '52	4.23M	81%	12.1
Oct. 22, '52	3.87	74	10.4
Oct. 30, '52	3.11	59	10.8
Nov. 17, '52	3.42	61	5.5
Feb. 9, '53	4.50	72	13.7

Several stool examinations were negative for ameba and the dysentery bacillus.

Treatment: Total hospital days 93.

Sulfonamides—16 days

Aureomycin and Terramycin—22 days

Emetine Carbarsone—None

ACTH and Cortisone—7 days

Banthine—None

Liver—13 days

Blood, excl. of surgery—3000 cc.

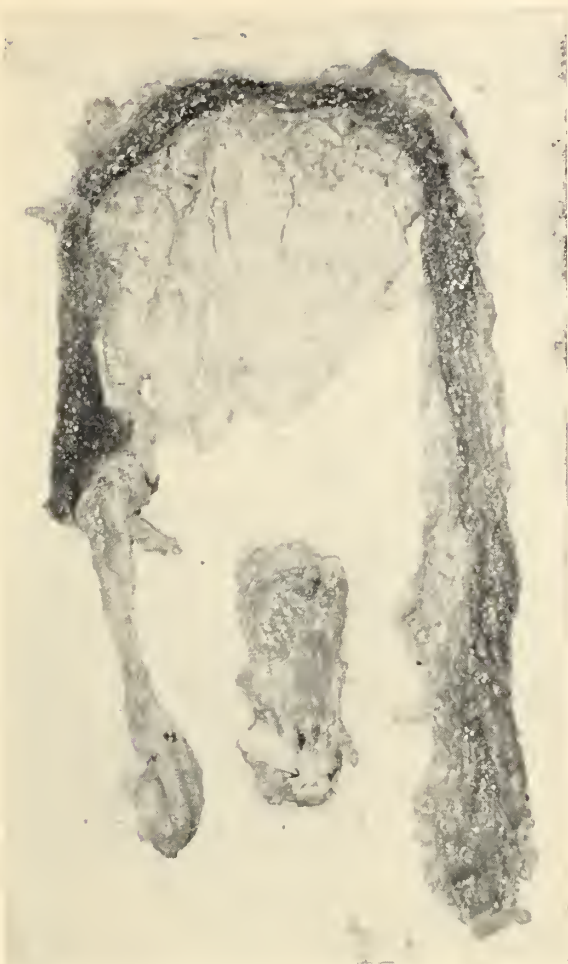


Fig. 4. Case 2. Colon removed from second patient reported.

The patient continued to pass blood and mucus via the rectum and made only slight improvement. He gained little or no weight and continued to have fever at times. A one-stage colectomy was performed approximately 2 months after the ileostomy was established.

The wall of the colon was greatly thickened and the mucosa was ulcerated throughout its entire length. There were several hundred pseudopolyps, and much old and fresh blood. A photograph of this colon is shown in Figure 4. It is interesting to note that the extremely marked and apparently irreversible changes took place in this patient's colon in only about three and one-half months.

This patient, after the total colectomy, made a speedy recovery. He gained about 40 pounds in weight and returned to his old

job. He also has been completely rehabilitated. In addition to returning to his former work, he has resumed his place in the life of the community, which includes the directing of a church choir.

The record of the third case follows:

Case 3: Mrs. M. D. B., Birmingham Baptist Hospital No. 49900, age 27, white female, housewife, was admitted to the hospital on October 25, 1954. She was referred from an out-of-town hospital with the diagnosis of ulcerative colitis. The disease, according to the history, had existed for about twelve years. She had had two or three hemorrhages but none in the past year. About six months before admission, she had begun to have cramping pains in the lower abdomen but not related to food or bowel movements. She had been relieved by ACTH and cortisone. At the time of admission she was taking 25 mg. of cortisone daily and 10 mg. of ACTH once weekly.

Of interest in the past history was a pregnancy with delivery by section one year before the admission. The disease during this pregnancy did not go into a remission. With medical consultation and supervision of her hormone therapy and other preparation of the colon with antibiotics and sulfonamides, surgery was done on October 29, 1954. A one-stage ileostomy and total colectomy, including perineal resection, was done. At the rectosigmoid junction, a carcinoma was found. This was reported by the pathologist to be a grade II carcinoma with infiltration of the muscularis. One of the ten lymph nodes found in the mesocolon contained metastatic carcinoma.

The patient made an uneventful recovery. She gained from 83 to 124 pounds in a few months. She considers herself to have no disability at this time.

This case emphasizes that one-stage ileostomy and total colectomy is desirable when conditions are favorable. This emphasizes, also, the danger of cancer development in the long standing case of ulcerative colitis.

SUMMARY

1. A brief review of the literature on ulcerative colitis has been given.
2. Total colectomy with ileostomy is presented as the chief surgical treatment of the disease.
3. Three illustrative cases are reported.

THE SURGICAL TREATMENT OF BILIARY DYSKINESIA

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The term biliary dyskinesia is used rather loosely in surgical literature to denote: 1. biliary colic without demonstrable anatomical explanation for its occurrence, and 2. epigastric bloating and discomfort subsequent to, if not consequent upon, cholecystectomy. For the purposes of this discussion the first definition only will be accepted.

This syndrome presents in two groups of patients: (1.) patients experiencing typical attacks of gallbladder colic whose cholecystograms reveal no stones and/or who, at careful surgical exploration, evince no stones or other evidence of mechanical explanation for the attacks of colic; and (2.) patients who have had the gallbladder removed and who continue to have attacks of colic "just like before the operation."

This latter group, to be classified as biliary dyskinesia, must be demonstrated to be free of retained common duct or cystic duct stones, gallbladder or cystic duct remnants, neuroma at the site of cystic artery ligation, stricture of the common duct, gastric or duodenal ulcer, or prolapsing tumor of the right colon or right renal calculus, any one of which conditions can give rise to symptoms indistinguishable from biliary colic.

Before the colic is accepted as biliary in origin, urographic study and roentgenographic survey of the stomach and duodenum and colon should be carried out. After these studies have proved negative, a cholografin study¹ of the biliary tree may prove revealing, but the final diagnosis will depend upon careful exposure of and exploration of the extra-hepatic bile ducts by inspection, palpation, operative cholangiogram, and opening the duct and exploring with scoop and sound, and irrigation. All these maneuvers having failed to demonstrate an anatomical basis for colic, the condition can be accepted as biliary dyskinesia.

The etiology of this condition has been the subject of considerable speculation. It has been variously suggested that the cause is hormonal, allergic, bacterial, or neurogenic

(abdominal migraine or epileptic equivalent), but there is fairly universal agreement that the final activating factor causing the pain is spasm of the sphincter of Oddi, with a consequent rise of intraductal pressure.

Various treatments^{2,3} have been proposed. Acting on the premise of a cholangitic causation of the spasm, McGowan⁴ and his associates recommend prolonged T-tube drainage. Coleman⁵ and his associates recommend vagotomy; Kjaergaard⁶ recommends choledochoduodenostomy; Halligan⁷ and his associates recommend section of the sphincter of Oddi when it is found to be scarred and contracted at secondary biliary duct explorations; and Sneierson⁸ recommends transduodenal sphincterectomy for this condition and reports four cases, three of which were relieved by the procedure, while one showed no improvement.

In a patient previously unoperated upon (the patient who still has his gallbladder), cholecystectomy, with or without one of the above procedures, has been tried, as has cholecystojejunostomy.

The following are reports on three patients who fulfilled the requirements above noted for the diagnosis of biliary dyskinesia, and who have been treated by transduodenal section of the sphincter of Oddi.

2. Aldercrentz, E.: Corpus luteum in the treatment of biliary dyskinesia, and especially of the postcholecystectomy syndrome, *Acta med. Scandinav.* 145: 15-19, 1953.

3. Jennings: Quoted by Cohn.

4. Sarkisian, S. A., & McGowan, J. M.: The relation of bacteria in the bile to biliary dynamics, cholangitis, and postcholecystectomy syndrome, *Surgery* 35: 566-572, 1954.

5. Coleman, E. P., & Bennett, D. A.: Postcholecystectomy syndrome treated by vagotomy, *J. Internat. Coll. Surgeons* 17: 865-871 (June) 1952.

6. Kjaergaard, S.: Choledochoduodenostomy in postoperative dyskinesia, *Acta chir. Scandinav.* 104: 87-92, 1952.

7. Halligan, E. J.; Perkel, L. L., et al.: Symptoms following biliary surgery, *J. M. Soc. New Jersey*, 48: 401 (September) 1951.

8. Sneierson, Hyman: Cholecystectomy and sphincterotomy for biliary dyskinesia, *Am. J. Surg.* 86: 429-435 (Oct.) 1953.

1. Cohn, E. M.; Orloff, T. L., et al.: The use of cholografin in the postcholecystectomy syndrome, *Ann. Int. Med.* 42: 59-68 (Jan.) 1955.

CASE REPORTS

Case No. 41150: A 65 year old white female was admitted to the hospital on April 17, 1952 because of severe colicky right subcostal pain with radiation to the right costovertebral angle, associated with nausea and vomiting, and relieved only by narcotics. This was the second admission. On the first admission, retrograde pyelograms, cholecystograms, and roentgenographic study of the colon, stomach, and upper gastrointestinal tract were reported as negative. Despite negative cholecystographic study, the presence of gallstones was suspected, and surgical exploration was advised. At operation on April 23, 1952 the gallbladder seemed a little thick-walled and edematous, and there was considerable fibrosis around the cystic duct. The common duct was normal in appearance and contained no stones. However, a bougie would not pass through the sphincter of Oddi. When the sphincter was exposed transduodenally, it was not unusual in appearance or on cut section.*

The operative procedure consisted of removal of the gallbladder and exploration of the common duct by sound, scoop, and irrigation. A grooved director was introduced through the choledochotomy opening down the common duct, and through the sphincter of Oddi. A longitudinal incision, 2 cm. long, was made in the anterior wall of the duodenum, and the sphincter cut under direct vision; and the long arm of a T-tube brought through it. The duodenum was closed transversely, and the common duct sutured about the T-arm. The tube was allowed to remain in place for 8 weeks to splint the sphincter open during the period of maximum fibrosis and then removed.

At last follow-up, on October 10, 1955, there had been no recurrence of symptoms.

Case No. 59915: A 23 year old white female was admitted January 24, 1955 complaining of severe episodes of mid-epigastric colicky pain, with radiation to the right infrascapular region ever since cholecystectomy had been done for stones on July 14, 1952. These attacks of colic had occurred almost monthly despite sedatives, antispasmodics, and a low fat diet, and were described as being identical to the gallbladder

attacks experienced prior to cholecystectomy. There had been no associated fever, chills, or jaundice, but she described herself as constantly nauseated.

Roentgenographic study of the stomach and duodenum had been reported as negative several months prior to her hospital admission. Thereafter, in another city, she had been first subjected to a suspension and D & C, and later a "removal of all her female organs," in a rather bizarre attempt to relieve the attacks of colic. No benefit had been experienced from these procedures. She had also had a reexploration of her right upper quadrant elsewhere with the same negative result. A repeat examination of the stomach and duodenum was carried out with negative reports. An intravenous cholangiogram demonstrated minimal dilatation of the common duct, but no filling defect.

At operation on January 31, 1955 there was no cystic duct remnant. The common duct was not remarkable in appearance, nor was the papilla of Vater or sphincter of Oddi. Exploration of the common duct and sphincterotomy were carried out as in the first case described, and the postoperative management was similar.

In response to a follow-up questionnaire, the patient stated on December 5, 1955: "I am doing much better since my last operation. I don't have any more acute attacks of pain, but sometimes I have mild attacks. Yes! I would say my last operation was a great benefit to me."

Case No. 53939: A 47 year old white female was admitted April 2, 1954 with the complaint of severe, periodic, colicky pain in the mid-epigastrium, usually accompanied by nausea and vomiting and requiring narcotics for relief. These symptoms had been present ever since the gallbladder had been removed for stones by another surgeon three years previously.

Similar preoperative studies were carried out with the exception that intravenous cholangiography was not yet available at that time. Essentially, the same surgical procedure and follow-up care was employed as in Case No. 59915.

At a follow-up visit on December 12, 1955 she stated that she still has attacks of colic similar to those experienced before her last operation, but they are less frequent and usually less severe.

*The pathologist's report was: "The gallbladder wall is neither scarred nor thickened. There is minimal infiltration by round cells and polys."

Comment: It is evident from the third case that this operation is not the hoped for panacea for biliary dyskinesia. It has, however, established itself as definitely worth trying. It is technically less difficult and less hazardous than choledochoduodenostomy, and in our opinion should be tried in suitable cases before the more radical procedure is adopted.

It is possible that the unfavorable results may be avoided by adopting the technique recommended by Jones and Smith⁹ where-

9. Jones, S. Austin, & Smith, Louis L.: Transduodenal sphincteroplasty for recurrent pancreatitis, *Ann. Surg.* 136: 937-46 (Dec.) 1952.

by a wedge is taken out of the sphincter and duodenal and common duct walls, and the mucosa united by interrupted sutures.

SUMMARY

1. Biliary dyskinesia is defined.
2. Theories as to its etiology are listed.
3. Suggested plans of treatment are discussed.
4. Three case histories are reported.

CONCLUSIONS

Transduodenal section of the sphincter of Oddi is recommended as a useful and safe, but not invariably effective, method of treatment for biliary dyskinesia.

LEUKORRHEA

CAUSES AND MANAGEMENT

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The purpose of this paper is to discuss some of the more important causes of leukorrhea and their management. No attempt to cover all causes and methods of treatment will be made as this would be very time-consuming, and perhaps boring. Perhaps at first glance it would appear that this is not a suitable subject for such a group as this, but its importance certainly cannot be overlooked. One's skill in the management of many of these diseases is much more obvious to the patient than one's skill in, say, performing a hysterectomy or any other gynecologic operation, and the patients are indeed grateful for the relief of these annoying symptoms.

The term leukorrhea is applied to all abnormal blood-free discharges from the genital tract. According to a statement by Huffman in his textbook on gynecology, this symptom is complained of more frequently than any other disturbance in the realm of gynecology.¹ According to Novak, it occurs in at least one-third of all gynecologic patients.²

Vulvar secretions will not be discussed here, although Skene's duct infection,

Bartholin gland infection, and acute urethritis are relatively common causes for discharge. Of these three, skenitis seems to be the most difficult to eradicate. Treatment is directed toward eradication of the infected gland, either by excision or cauterization.

Vaginitis, I believe, is by far the most common cause of leukorrhea. The causes of vaginitis are commonly divided into the following:

- (1) Trichomoniasis,
- (2) *Monilia albicans* infection,
- (3) Gonorrhea,
- (4) Non-specific bacterial infections, usually anerobic bacilli, staphylococci, and streptococci.

Of these four, the trichomoniasis and monilial infections are by far the most common and, in many instances, the most difficult to control. In my opinion, the one who gets the best results in this type of vaginitis, regardless of the drug used, is the one who perseveres in his treatment and has adequate follow-up on his patients. There are many drugs, suppositories, capsules, and douches on the market today for the treatment of trichomoniasis and I will not attempt to enumerate them because you are all familiar with them. In recent years, many antibiotics, such as Aureomycin and Terramycin, have been used beneficially in the treatment of trichomoniasis vaginitis. However, the disadvantage of the appear-

Read before the Alabama Association of Obstetricians and Gynecologists in Birmingham, October 13, 1955.

1. Curtis and Huffman: *Textbook of Gynecology*, ed. 6, p. 616, 1950.

2. Novak, E.: *Textbook of Gynecology*, ed. 2, p. 454, 1944.

ance of a secondary fungus infection during and following treatment is a problem. My results for trichomoniasis have been best and more consistent using Floraguin powder insufflation of the vagina daily for 3 to 5 days, followed by acid douches and daily Floraguin suppositories throughout one or two entire menstrual cycles. The Milibus suppository also seems to be very effective in most instances. The monilial infections have been treated for years with 1 to 5% gentian violet and the results have been good, but it has certain undesirable qualities, such as staining, although this preparation has been improved in recent years. More recently, propionic acid jel has been used, also, with good results. I have been favorably impressed with the results of boric acid in the form of 10 grain suppository or capsule inserted nightly for a period of 5 nights in succession, followed by the same treatment 2 to 3 times weekly for 2 or more weeks. I believe its effectiveness is equal to the preparations I have mentioned.

Gonorrheal vaginitis would seem to be a disappearing disease in this day of antibiotics. I have had very little experience with it except for a rare case in children, which usually responds well to penicillin and estrogenic therapy.

In the mixed and non-specific bacterial infections, the antibiotics and sulfonamide-containing gels have been used with much success. Joseph Shanaphy of the Department of Obstetrics and Gynecology at New York University Bellevue Medical Center reports uniformly good results in cases of mixed bacterial infections, monilial and trichomoniasis infections with the use of Milibus suppositories alone. He reports 73% were asymptomatic and 68% were free of pathogens after a ten-day treatment. In his summary he concludes that "the uniformity of good results obtained in the treatment of 510 cases of symptomatic leukorrhea caused by trichomonoid, monilial, or mixed bacterial infection makes extensive and uncertain laboratory work of lesser importance in the management of this frequent complaint."³

I personally believe the results are better by directing a more specific therapy for the particular offending organism. Another not infrequent cause for leukorrhea

in the older age group is atrophic or so-called senile vaginitis. Specific benefit is obtained from estrogens but frequently their use is undesirable and acid jelly is often adequate to control the symptoms of this normal aging process. Systemic measures, such as adequate nutrition and vitamin intake, should be included. It is in this age group when no specific cause for the discharge is found that a curettement may be indicated. Some benign or malignant lesion of the endocervix or fundus may be found. However, leukorrhea as a symptom of cancer is usually considered to be a late symptom and is certainly of no great important diagnostic significance in early cancer.

The leukorrhea produced by foreign bodies such as sponges, packs, intra-vaginal tampons, and pessaries usually speak for themselves. One of the most important causes of leukorrhea, and perhaps second only to the vaginitis in frequency, is cervicitis. Hypertrophied, infected cervical glands and lacerations and interference with drainage are usually responsible for persistence of cervical infections. A large percentage of postpartum women will have some form of cervicitis producing some discharge. Fortunately, most of them are simple erosion which can be easily eradicated. After malignancy has been ruled out, most of these erosions respond to electrocauterization on one or more repeated occasions, if necessary. In addition, the antibiotics and various forms of antiseptic suppositories and jellies are beneficial in getting rid of these superficial erosions and infections.

But what about the large, hypertrophied, cystic, edematous and lacerated cervix with deep-seated infection and endocervicitis? Cauterization of this type of case, or repeated cauterization, is known to be of no benefit practically. Likewise, the antibiotics are of little value in curing these deep-seated infections of the cervix. I know that Dr. Herbert Thomas of Birmingham has been very much interested in this particular problem. He has described a multiple biopsy method, followed by insertion of a pack saturated in a chemical solution which serves as a sort of hemostatic agent, I believe. I would be interested in knowing about his results in these cases and also some of the complications that he may have encountered in performing this procedure. It would seem to me that it would be a rather difficult task to eradicate these in-

3. Shanaphy, Joseph: New York State J. Med., May 1, '55.

fections in this manner. I think the follow-up on his cases would be interesting.

Conization is of definite value in these cases, but it too has its drawbacks and the procedure is not to be taken lightly. Hemorrhage and scarring, with resultant stenosis and occasional resultant hematometra or pyometra are well known complications following this procedure. The resultant scarring and stenosis that may occur may be a great problem in the childbearing woman with a subsequent pregnancy.

I believe the treatment of choice in these cases of chronic, hypertrophied cervicitis, if the patient's family is complete, is total hysterectomy. I do not believe that it is necessary to apologize to the pathologist for taking out an otherwise normal uterus with this particular type of diseased cervix. Dr. Curtis Tyrone of the Ochsner Clinic has held to this point of view for many years and has received much criticism in many circles for his so-called radicalism. He contends that menstruation is not necessary for a happy life, that the only purpose of the uterus is for having babies, and that when that purpose is fulfilled and completed and the uterus is diseased or causing trouble, then it should be removed. Hysterectomy for this condition is very controversial in many places, but I believe it is the most satisfactory form of treatment in many instances.

Another type of leukorrhea that is occasionally seen is that following complete hysterectomy. This may be due to drainage from chronically infected adherent ovaries or tubes or more frequently from granulation tissue from the cuff. Simple cauterization is usually effective in destroying the granulation tissue.

Lastly, I would like to mention psychogenic leukorrhea. It is thought that some of these women apparently have a greater outpouring of cervical secretion under abnormal stress or strain. My experience with these cases has been very limited, and I hope our guest speaker, Dr. Kroger, will mention this problem in his presentation.

In summary, some of the more common causes of leukorrhea and their management have been presented.

Further Drug Experiments May Explain Epilepsy—A new drug, which almost completely controlled epileptic seizures in 34 of 126 patients, eventually may help explain the physiological basis of the seizures, according to three Boston physicians.

The drug acetazolamide (Diamox) caused a 90 to 99 per cent reduction in seizures in 12 other patients, a 50 to 90 per cent reduction in 22, and a smaller reduction in the remaining 58, the doctors said in the Jan. 28 Journal of the American Medical Association.

Epilepsy is characterized by sudden disturbances of brain function, resulting in temporary loss of consciousness. The attacks range from minor to major ones. It may have a hereditary basis or have other causes, including brain injury, a disease in another organ which acts on the brain, emotional disturbances, and alcoholism.

In the past it has been found that changes in the amount of carbon dioxide in the blood, which affect the body's acidity, influence the course of epilepsy. An increase in acidity has been helpful for young persons and certain other types of epileptics. This acidosis has been achieved by diets, inhalation of carbon dioxide, and other methods, but all of them have been limited in use.

The physicians based their investigation on another method of reaching acidosis: stopping the action of carbonic anhydrase. This agent combines carbon dioxide and water to form carbonic acid, thus helping to maintain the balance of carbon dioxide in the blood. They felt it worth while to see if a potent carbonic anhydrase inhibitor could produce the desired change in carbon dioxide level, and thus control seizures.

They also felt the study would give a clue to the reason acidosis affects epileptic seizures and whether the action results from general acidosis in the system or from the action of carbon anhydrase in the nerve cells.

Acetazolamide, the carbonic anhydrase inhibitor they used, did result in patients' improvement, although it did not answer these questions. However, the physicians said further research with it may show more about the drug's effect on the chemical and physical changes in normal and abnormal brain tissue. This in turn may show the difference between the two types of tissue and explain the action of epileptic seizures, they said.

Acetazolamide was given to 82 patients below the age of 12, 24 between the ages of 12 and 19, and 20 over the age of 20 for periods ranging from three months to three years.

The degree of improvement was not related significantly to a personal history of brain damage, a family history of epilepsy, or to the type of seizure, but seemed to be based on individual reactions, they said.

None of the patients was made worse by the drug, nor did any abnormalities of blood, urine, or bone develop. Unfavorable side effects most frequently reported were drowsiness, loss of appetite, and irritability, while favorable effects included improvement in behavior, sleep, and alertness.

Prednisone Used for Allergies, Anemia—Two Chicago physicians report further evidence that prednisone is valuable in treating allergic diseases, and two New York physicians said in a preliminary report that it may be useful for anemia.

The reports on the synthetic hormone, which is related to cortisone, appear in the Jan. 28 Journal of the American Medical Association.

Drs. Alan R. and Samuel M. Feinberg, of the allergy clinic and allergy research laboratory, Northwestern University Medical School, Chicago, compared the effectiveness of prednisone and cortisone in 80 patients with allergic diseases.

They found that prednisone was five times more potent than cortisone, meaning that smaller doses of prednisone are necessary to obtain and maintain the same results as cortisone. Prednisone's side effects were about the same as those of cortisone, except that generally they did not upset the body's salt and water balance.

Of 50 patients with perennial chronic asthma, 41 obtained complete or nearly complete relief with prednisone. Satisfactory results also were obtained in 10 patients with seasonal asthma due to pollen or mold allergy, and in 27 of 32 patients with asthma and seasonal allergic rhinitis.

Other types of allergy successfully treated were perennial allergic rhinitis, allergic eczema, serum sickness reaction from penicillin, and chronic hives.

Drs. Leon N. Sussman and Jack R. Dordick of the medical service and hematology laboratory of Beth Israel Hospital, New York, used the hormone for three cases of acquired hemolytic anemia, in which red blood cells are destroyed by some agent in the blood. The exact cause of the disease is unknown.

Treatment included the standard methods, cortisone, and prednisone. Prednisone in "relatively small" doses satisfactorily alleviated the anemia, without the appearance of any undesirable side effects.

The effectiveness of the hormone in this small series makes its further study essential, they said.

Doctor Describes Portable Telephone Aid—A device which allows hard-of-hearing persons to use any telephone without inconvenience is described in the Journal of the American Medical Association for January 28.

A portable, pocket-sized, telephone amplifier, called the Scottie Phone-Aid, has been developed. It can be clipped to any telephone receiver in a moment, Dr. Matthew N. Hosmer, of the subdepartment of otolaryngology, University of California School of Medicine, San Francisco, said.

Its use eliminates the necessity for the hard-of-hearing person to hold the receiver against his own hearing aid. The plastic case is thin enough to fit the receiver without disturbing the normal relationship between the mouth and the transmitter, he said.

The amplifier is powered by two small batteries and three transistors. The pick-up of speech from the telephone is through an induction circuit located in the small arm that clips the instrument to the receiver. The amplifier was developed by the Remler Company.

One Shot of Penicillin May Prevent Infection—A study conducted among Navy recruits has shown that one injection of penicillin may prevent the development of streptococci infections.

A single injection of benzathine penicillin G was given to each of 2,913 recruits at the Bainbridge, Md., training center. These men had been found to have beta-hemolytic streptococci in their throats.

In 624 of these men the streptococci were classified as group A, which cause sore throats and rheumatic fever. The one injection of penicillin eradicated the bacteria in the throats of 597 of these men and prevented reinfection for at least one month, the report in the January 21 Journal of the American Medical Association said.

Of those 597 men, 576 had no known recurrence of the bacteria for the remainder of their recruit training.

The authors said the results indicated that benzathine penicillin G may warrant further investigation as "a safe, effective, long-term single-injection" preventive agent in the control of streptococci infections, especially in large groups.

Unfavorable reactions, which generally consisted of rash and hives, occurred in only 25 of the 2,913 men. One case was considered serious. There was no case of rheumatic fever in any recruit who had received an injection of the antibiotic.

Making the report were Lt. Thomas J. Brooks, Jr., (MC), U. S. N. R., now professor and chairman of the department of preventive medicine at the University of Mississippi School of Medicine, and Capt. Tilden I. Moe, (MC), U. S. N., now commanding officer of the U. S. Naval Hospital, Guantanamo Bay, Cuba.

Chronic Illness Group to Disband—The Commission on Chronic Illness, founded in 1949, will end its activities as an incorporated organization on June 16. It held its last meeting Feb. 9-10 at the Park Sheraton hotel, New York.

The work of the commission will be taken over by its founders, the American Hospital Association, the American Medical Association, the American Public Health Association, and the American Public Welfare Association, and other permanent agencies concerned with chronic illness.

Among the major projects of the commission have been a study of the prevalence of chronic illness and the needs for care of the chronically ill in an urban and a rural area, a study of the characteristics of patients requiring long-term care in institutions, and a study of 12 organized home care programs.

An editorial in the Jan. 28 Journal of the American Medical Association said the A. M. A.'s council on medical service will assume responsibility for the Chronic Illness News Letter on Feb. 1.

The 30 members of the commission represent industry, agriculture, education, welfare, religion, journalism, law, labor, public health, medicine, hospitals, government, and the public.

"The commission is to be congratulated on its accomplishments, and it is heartening to know that, although the commission is officially to be disbanded, its work will continue."

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THE MONTH IN WASHINGTON

Bills that have been hanging fire in Senate and House committees for over a year finally are getting attention as the Administration pushes its program for broader and more uniform medical care for the families of servicemen.

A new version of a bill was dropped in the hopper on the opening day of this session by Chairman Carl Vinson of the House Armed Services Committee. It was designed in part to supply answers to a number of questions growing out of earlier versions sponsored by the Defense Department. Actually it raised more questions, which only hearings and testimony from expert witnesses and debate on the floor of Congress can answer.

The bill (H. R. 7994) authorizes, as a matter of right, broad medical care for dependents of the armed forces as well as of Coast Guard, Public Health Service, and Coast and Geodetic Survey personnel serving on active duty. (The bill would authorize health insurance only for dependents of the latter three services.) Separate bills have been introduced in the past providing medical care for dependents of the Coast Guard, PHS and Geodetic Survey, but this marks the first time they are brought into the same bill with military personnel.

In provision of services, the bill has no surprises over its predecessors. It calls for diagnosis, treatment of acute medical and surgical conditions, treatment of contagious diseases, and maternity and infant care.

On another point of major interest to physicians, the bill drops out all mention of the home-town medical care plan, which was a part of Mr. Vinson's earlier bill. That bill contemplated use of civilian hospitals and doctors for those dependents who were not near military medical facilities and who had not taken out health insurance, with the government paying part of the cost.

Another area of almost certain debate in the latest bill is the insurance features. There are these main points:

1. A serviceman may elect to rely entirely on the chance of finding space available in a military hospital or clinic for his family, or he may choose protection through an insurance plan.

2. The family deciding on insurance has

its choice of going to a military hospital or using civilian resources. The uninsured family could be charged by the military for outpatient care, and would have to pay subsistence costs while in the hospital.

3. A serviceman taking insurance would pay 30% of monthly premiums for a basic plan covering his wife and children, and the entire premiums for coverage of dependent parents and parents-in-law. Parents and parents-in-law who found space in a military hospital, however, would be admitted on the same basis as wives and children.

4. Catastrophic-type coverage, at additional premium.

5. To take care of long term illnesses, the bill provides for transfer of dependents to military facilities once they have used up benefits in an insurance plan. Or if such transfer isn't feasible, the government could pay the additional costs for private care.

The bill was introduced before the Defense Department had completed a survey of Blue Shield, Blue Cross and commercial plans to determine to what extent they could provide care under the bill. Conceivably the survey could further change the shape of an already much-revised piece of legislation.

President Eisenhower in his State of the Union message summed up the case for dependent medical care this way: "Much has been done to attract and hold capable military personnel, but more needs to be done." He also broadly outlined administration plans in the health field, with emphasis on more money for research and federal aid to medical schools and to private research facilities for construction. With bipartisan bills along this line already before Congress, these proposals may move right along before adjournment in mid-summer.

However, Congress might decide that for this year medical schools should settle for the \$90 million of Ford Foundation money being made available to private schools to help strengthen teaching staffs.

By the same token, there was some question just how much Congress would vote for Hill-Burton hospital programs this session in the light of the \$200 million Ford grants to some 3,500 non-profit hospitals.

A recent Public Health Service report indicates that states are now showing less

preference for "public" Salk vaccine programs than they did a few months ago. The sixth allotment marked the high-point in "public" preference. Then came a slight but steady decline.

POLIO ATTACK RATE DENTED

Figures gathered by the National Foundation for Infantile Paralysis indicate that for the first time man has dented the nationwide pattern of polio attack with respect to different age groups.

This was revealed recently by Dr. Hart E. Van Riper, National Foundation medical director, who said that "hospital admission rates for polio dropped 52 per cent in the eight year old group and 40 per cent in the seven year group—the principal age groups given vaccine—as compared with a decline of only 17 per cent in the rate for the total population." For children from 15 through 19 years of age, not receiving vaccine, hospital admission rates decreased by only 12 per cent, he added.

The figures used by the National Foundation in its age distribution study were based on reports of actual admissions of polio patients to hospitals during a June-to-November period in 1954, compared with admissions during a similar period in 1955.

"Usually, seven and eight year olds are among those with the highest polio attack rates," Dr. Van Riper declared. "This year, however, they are falling far below usual levels. The rate for eight year olds has fallen so sharply that it may wind up in 1955 below the rate for 10 to 14 year olds."

According to Dr. Van Riper, there is little doubt that the dip in polio hospital admissions among seven and eight year olds is a result of the administration of Salk vaccine to this age group. The figures verify reports from the U. S. Public Health Service based on polio incidence in 11 states.

Dr. Van Riper pointed out that 1955 in general was a somewhat lighter polio year than 1954.

"However," he said, "the overall drop in incidence would not account for this change in age distribution."

Dr. Van Riper added that another analysis of official reports from 11 states, when applied to the nation as a whole, indicates that the program of Salk vaccine inoculations in the schools probably prevented 1,200 to 1,300

cases of paralytic polio that would otherwise have occurred in 1955.

In arriving at this figure, National Foundation statisticians estimated that nearly 1,700 cases of paralytic polio could have been expected among 7,000,000 vaccinated children if they had received no vaccine. If the degree of protection displayed in the 11 states holds for the rest of the country, only about 400 paralytic cases will occur among these 7,000,000 children.

CHLORPROMAZINE

Chlorpromazine, a valuable sedative which has profoundly influenced the treatment of mental illness, is converted in the body into a substance which new research evidence indicates may be even more valuable.

The new chlorpromazine derivative is known as chlorpromazine sulfoxide. It appears in the urine of men and animals following the administration of chlorpromazine and it seems, from preliminary animal experiments, to exert the same sort of tranquilizing effects that have made the parent drug so valuable in the treatment of excited mental states. What is more important—it seems to lack at least one of the undesirable side effects of the parent compound.

The scientists who isolated the new sedative are Dr. Norman P. Salzman, Dr. Neil C. Moran, and Dr. Bernard B. Brodie, researchers with the Public Health Service's National Heart Institute, National Institutes of Health, Bethesda, Md. A full account of their work appears in the December 10 issue of the British journal *Nature*.

Chlorpromazine itself is best known for its value in the treatment of excited mental states. It produces a state of indifference to the causes of anxiety, whether those causes are real, such as the pain and fear of a cancer patient, or imagined, such as the hallucinations of a psychotic. Many sufferers from mental illness have been brought within reach of psychiatric help and subsequently cured with the help of chlorpromazine. Chlorpromazine does, however, produce postural hypotension in some people. Postural hypotension is a dip in blood pressure—sometimes with a momentary dizzy spell—which results when one shifts from a lying to a sitting or standing position. Although not dangerous, the postural hypo-

tension of chlorpromazine is somewhat objectionable for patients who must take the drug for long periods of time.

Animal experiments comparing the two compounds at the National Heart Institute indicate that the new sulfoxide may be effective without producing postural hypotension. Dogs were given enough of either compound to produce the same sedative effects and then were tilted vertically on a special table, while blood pressures were recorded directly from a leg artery. The dip in blood pressure on tilting to vertical—very apparent in the dogs given chlorpromazine—was comparatively lacking on the blood pressure recordings from the sulfoxide dogs.

Chlorpromazine sulfoxide has not yet been tried in humans, and its experimental use in animals, though encouraging, is still inconclusive. The Heart Institute researchers are currently planning clinical trials of the compound in human patients and are hopeful that it will be effective in doses which do not produce the undesirable side effects of chlorpromazine.

STATUES OF RENOWNED SURGEONS IN HALL OF FAME

Statues of eight of the 13 most renowned surgeons the world has ever known have been completed for the International College of Surgeons' Hall of Fame at 1516 Lake Shore Drive, it was announced recently by Dr. Max Thorek, founder and secretary general of the college.

Six of the statues have been placed in their positions in the museum's hall of immortals where they will stand permanently. The other two figures will be placed there shortly. Dr. Thorek said that the remaining five sculptures will be finished by the end of June 1956.

The statues are life-sized, sculptured in stone, resting on a marble base. They are the work of Edouard Chassaing and Louis Linck of the Chicago Art Institute and have been contributed to the college by Edwin Speidel, inventor and chemist, and Mrs. Speidel, of Providence, R. I.

The finished statues are those of Imhotep, the earliest known physician, born approximately 2700 B. C.; Hippocrates (460 B. C.), the father of medicine; Galen (131 A. D.), who pioneered in surgery; Ambroise Paré (1510), father of modern surgery; Andreas

Vesalius (1514), famous anatomist; William Harvey (1578), discoverer of the blood circulation; Giovanni Morgani (1682), father of pathological anatomy, and Mme. Marie Curie (1867), who discovered radium and is the only woman among the surgeon immortals.

The statues of Mme. Curie and Morgani will be placed in position within the next two weeks. The five remaining sculptures will be of Pasteur, Semmelweis, Morton, Lister, and Roentgen.

Dr. Thorek, whose own unbounded energy and inexhaustible enthusiasm have been the spark behind the founding and growth of both the college and its Hall of Fame, issued a column-long statement in warm praise of Mr. and Mrs. Speidel's contribution of the statuary to the college.

"Mr. Speidel's generosity is matched only by his success in his manufacturing skill and chemical discoveries," Dr. Thorek said.

"He is a practicing philanthropist. He has made a notable and permanent contribution to art, science and history all in one.

"The International Surgeons' Hall of Fame is not an ephemeral thing. It is planned for the ages to come, and will stand, long beyond our day, as a perpetual monument to the achievements of men of science all over the world."

In appreciation of Mr. Speidel's contribution, the college has conferred honorary membership on him.

A RESOLUTION

WHEREAS, In the death of Doctor Robert Eugene Hale, Sumter County and the state of Alabama have suffered an immeasurable and indefinable loss, and

WHEREAS, It is not possible for us to enumerate or evaluate his manifold services, for he always gave of himself to others, all that he could without regard for self or recompense, and

WHEREAS, We rejoice in that we were permitted to walk a part of the way with him, and to see his joy in serving the people whom he loved, and

WHEREAS, We rejoice further that he was able to see the fruits of his later endeavors, namely, the building of the health center for Sumter County and the assurance of the District II Tuberculosis Hospital to serve West Alabama and which is to be a memorial to him, and

WHEREAS, His departure grieves us and distresses us, but does not impoverish us because his life and work had so enriched ours, and

WHEREAS, His example shall ever be to us a shining beacon, therefore be it

Resolved, That the members of the Sumter County Medical Society, in regular meeting assembled, do express sympathy to his family, to the people of Sumter County and West Alabama, and to the medical profession at large, all of whom he served and loved and all of whom were recipients of his wisdom, concern and care; and express the conviction that the enshrinement of his love, spirit and ideals in the hearts and minds of the people of this region shall endure, and be it further

Resolved, That these resolutions be spread on the pages of the press of Sumter County, and sent to the family, and be recorded in the minutes of the Sumter County Medical Society and be forwarded to the Journal of the Medical Association of the State of Alabama.

THE AMERICAN ACADEMY OF OBSTETRICS AND GYNECOLOGY

The Fourth Annual Interim Meeting of District VII of The American Academy of Obstetrics and Gynecology will be held at the Peabody Hotel, Memphis, Tennessee, March 9-10, 1956.

A two-day program has been planned, consisting of 11 scientific papers by Fellows, 6 unusual case reports, 9 short papers by Residents, and 16 Luncheon Round Tables.

The Academy banquet, with entertainment to follow, will be held on Friday evening, March 9th.

Wives are invited.

Doctor William T. Black, Jr., is Chairman of the local Arrangements Committee.

Antibiotics Double as Deodorants—Antibiotics have been used for lots of things and now physicians are using them as deodorants. This really isn't as strange as it seems.

Researchers have found that it is not the perspiration which causes odor, but the action of bacteria on the perspiration. Antibiotics kill the bacteria.

Two Philadelphia physicians studied 10 men who normally did not use deodorants or antiperspirants and found that repeated application of antibiotics completely stopped underarm perspiration odor for as long as 18 hours after the last application.

Neomycin-based creams proved to be most effective in stopping the odor, they said in the Dec. 31 Journal of the American Medical Association.

Antibiotics may be the solution for "those few" persons who cannot tolerate the standard aluminum salt deodorants, which usually are "highly effective," they said.

A cream containing neomycin sulfate was used once by 25 men. No further washing or application was permitted. Nineteen of the men were without any odor on the first day, seven the second, and four the fourth.

In another part of the study, a cream containing the antibiotic, chloramphenicol, prevented odor in 18 of 25 men the first day, six the second day, and four the fourth.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

RETIRING ADDRESS OF E. DICE LINEBERRY, M. D.

As President, Jefferson County Medical Society
Birmingham, Alabama

I am happy to have served as your president. Excuses for not contributing to the civic affairs of one's community are easy to find. I have used health misfortunes which have plagued me during the past ten years as an excuse not to take an active part in our county and state medical societies. Also, I have frequently been unable to attend the annual sessions of the State Medical Association because of my interest in the American College of Physicians whose annual meeting time conflicted. The apparent lack of interest and participation in the affairs of your county and state medical societies surely tended to disqualify me for the honor of becoming your president. I, therefore, chose to consider this honor a personal compliment, which I badly needed. I know of nothing you could have done to so improve my morale. The feeling of good fellowship and the spirit of cooperation between our members from physician groups with varied interests have greatly improved over that of 10 or 15 years ago. This has made my work both pleasant and easy.

The other officials and various committees, whether appointed or elected, have taken their work seriously and have discharged their duties promptly. I have requested the chairman of each committee to submit by the end of this year a written report of his committee's activities and recommendations. Only those reports which require action will be presented to the Society. The others will be filed for reference and possible use by the president-elect in formulating a plan of action.

You have instructed me as your president to represent you or appoint representatives to many organizations concerned with the affairs of our community. The scope of a few of these organizations is local, but many have a nation-wide and ultimately a world-wide influence. Some are concerned with non-medical affairs, but most are fringe medical organizations. In the minds of the

people our Society has approved these organizations by our representation in them. A passive attitude by us regarding their activities is not in the best interest of the public.

The discovery of new and utilization of old scientific facts, the improvement in diagnostic techniques, and the development of new therapeutic procedures during the short thirty years which I have been a physician have progressed at a pace beyond imagination. Second rate medical schools have practically disappeared from America. Present methods of distributing medical information leave no excuse for the uninformed.

The respect and confidence of the individual are requisite of our rendering the best medical care. The trust and faith which people have in men of medicine often approach the mystic and would seem to have their facsimile in that faith which is peculiar to religion. We have among us a few and only a few individuals who misuse this trust and are ever ready to pounce on people who become physically, emotionally or mentally ill. Tact and caution are required when these birds of prey, who masquerade as doves, are encountered. Attempts to expose or discipline them may start serious reverberations.

We as physicians must meet the health needs of our community. Needed and helpful medical care is the right of every individual. This right is due him because of illness and not because he is sick with a particular disease. Neither does his belonging to a particular political, economic or social group alter this right.

The social and economic aspects of medical care are rapidly changing and demand our immediate attention. The problem of financing the ever increasing cost of needed medical care, without disturbing the mutual confidence, respect and obligations of the individual patient and the individual physician, is a difficult one. The group of brains presently assembled here has perhaps had more time and money spent on its development than any other similarly sized

group which could be accumulated from our community. You and only you have the ability and the training to minister to its health needs. The time has come when a considerable part of this brain power must be spent in preserving and improving our American way of life. Plans now being made for spending money for such things as a full time office and hiring an executive secretary will not be sufficient. There must be found among us a few physicians who have the ability and desire to direct us and can sacrifice the time to do so. These individuals need to have the strength of character to promote principles which are beneficial to the entire community with disregard of special personal benefits or immediate reward.

I would have you devise means of keeping yourself better informed about and of making your influence more keenly felt in the political and social affairs of our community but especially those related to health.

Again, I am happy to have been your president and I am grateful to each of you for your part in making this a joyful year.

WHERE THE BATTLE SHOULD BE WON

W. A. Dozier, Jr.

Director of Public Relations

For some years now the Association's public relations committee has been urging each physician to take more active interest in all civic and community activities. At the same time, each has been urged to broaden his scope enough to realize that our system of medical care is only one part of the free enterprise system or the American way of life.

During the last few years a number of writers and speakers have constantly stressed the fact that we are in a crisis, and many seem to believe that corrective action is no longer possible. Perhaps so, perhaps not.

Last March, the Opinion Research Corporation of Princeton, New Jersey, surveyed high school seniors of eighty-six schools scattered across the nation on their attitude toward the free enterprise system. Look at some of the results: 82% do not believe there is competition in business, 60% said owners get too much of the profits, 76% said owners get most of the gains from new machinery, 55% support the Communist

theory "from each according to ability, to each according to needs," 61% reject the private incentive as a need to the survival of our economic system, 60% said a worker should not produce all he can.

Again, let it be said that your profession is but a part of the total picture. The whole system is of prime importance to you. The results given above came from school kids. If the future leaders of America do not believe in our system, what hopes have we for its preservation?

Think on these matters. Get interested in your schools. Find out what is being taught—and how. Concern yourself with remedial action if such is needed. It is within the school system and the home where the battle should be won. It is a battle for the minds of the future voters, politicians, laborers, and leaders. It can be lost by default if we tacitly assume that our system is best and will be accepted as such by future citizens. Let it not be said we stood by, too busy with our own little problems, to see what was happening to the full structure on which our lives are lived.

Spleen Removed to Save Eye—Three Brooklyn, N. Y., physicians have reported the removal of a patient's spleen in the hope of saving an eye.

They said in the December 1955 Archives of Ophthalmology, published by the American Medical Association, that they believe their case is unique.

A 58-year-old white woman had chronic rheumatoid arthritis, enlargement of the spleen, and leucopenia. This combination is known as Feltz's syndrome.

In addition to these symptoms, the woman developed an inflammation of the left eye. The authors said they knew of only one other case in which eye difficulties were associated with Feltz's syndrome.

The woman's eye was treated with antibiotics, but eventually it had to be removed. Two weeks after she was discharged from the hospital, the right eye became inflamed.

Because of her low white blood cell count, her resistance to infection was lowered. The physicians decided to remove the enlarged spleen, which apparently plays a part in producing leucopenia. They hoped this would improve her general physical condition, which in turn would protect the eye from further infection.

Following the operation, the white cell count rose to above normal and the condition of the eye improved. Fifteen months later the vision had improved to 20/50, compared to 20/200 before surgery.

The report was made by Drs. Paul J. and Marilyn Ostriker and Mortimer A. Lasky from the ophthalmological service of Jewish Hospital, Brooklyn.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.
State Health Officer

LIVING WITH MULTIPLE SCLEROSIS

Contributed by
Nadine Pitts, Director
Division of Public Health Education

More than a century ago, an English nobleman, Sir Augustus Frederick D'Este, was a victim of a mysterious disease. Because he indulged in a then popular custom, we today have a vivid description of his disorder. He kept a diary, in which he noted that "now a new disease began to shew itself . . ." At first, D'Este suffered from indistinct vision, which he believed was due to or caused by the tears he shed at a friend's funeral in Scotland! Later, he wrote that "imagined spots" floated upon his eyes, and the situation increased to the extent that he saw all things "double." It was then, also, that he complained of numbness of the limbs, extreme fatigue, and a loss of sense of balance. And then, six years after his eyes blurred at the funeral, D'Este suffered from bladder and bowel disorders, staggering gait, and paralysis.

The year was 1835 when this Englishman first observed the symptoms of the disease that has come to be known as multiple sclerosis, or simply by the two letters MS to many people. Another 40 years later a French neurologist named Charcot recognized the disease as a distinct medical entity and began to define its symptoms and pathology. Our knowledge of its symptoms today has changed only slightly, and the cause as well as the cure remain unknown. Thus, multiple sclerosis is described by some medical authorities and public health officials as the foremost neurologic problem of our time.

Perhaps no other neurologic disorder has stimulated so much interest as this one. As an unfathomed mystery, multiple sclerosis is a challenge to doctors and to laymen as well. There is still another important reason for the widespread interest. As a chronic disease multiple sclerosis has a disruptive effect: the social, economic and psy-

chologic factors in the lives of patients suffering from it are often out of all proportion to the actual physical disability the disease causes.

There are about a quarter of a million victims in the nation today. Needless to say, there are many other diseases which attack a much larger number of people. But, as has been pointed out, the relative importance of multiple sclerosis cannot be measured in terms of how frequently it occurs.

A pamphlet published by the National Multiple Sclerosis Society tells of a 46-year-old man in eastern Pennsylvania who has suffered from the disorder for more than 20 years. However, this patient—himself a doctor—has treated approximately 4,000 patients in the space of five years. He has done so despite severe disabilities which have confined him to a wheelchair. In addition to this large private practice, he has authored works of fiction and medical articles, although he can no longer write long-hand, type or read.

However, not all multiple sclerosis victims adapt themselves as well as this doctor to their disabilities. In fact, this doctor himself outlines some of the problems which faced him, and, by extension, other victims as well. He wrote that he at first tried to conceal his disorder. He attempted things that he could not do, things like dancing. In what he calls the "counterfeit" existence he tried to lead, he did some things so inefficiently that he was "cast in an unfavorable light." Although his "every step or gesture revealed that something was radically wrong . . . I would not admit it to myself."

Thus, not only should desirable help be available for the multiple sclerosis victim, but often he needs assistance in accepting such help. The discovery of the cause and cure of this disease is a challenge to human ingenuity, while living with the disabilities it imposes is a challenge to human adaptability.

Perhaps the two most important sets of facts—the cause and the cure—about multiple sclerosis remain hidden from view.

But some things are known about this disorder. Many studies of the signs and symptoms of multiple sclerosis have been made. The French neurologist we mentioned earlier stressed three classic signs which doctors still look for in making a diagnosis. These are nystagmus, or a rhythmic jerking of the eyeballs, intention tremor, or the quivering which occurs with purposeful effort, and scanning or slurring speech.

In probably no other disorder do the characteristics vary so widely as they do in cases of multiple sclerosis. At first, the signs may be minor ones, such as the visual blurring experienced by the Englishman D'Este. Moreover, the symptoms may have been such a mild inconvenience they may go away and they may not be remembered until many years later, when more serious signs are seen. In still other cases, major symptoms appear immediately or shortly after the disease's onset.

One recent survey demonstrates how frequently some symptoms occur in multiple sclerosis. A large number of patients were polled, and the surveyors found that weakness in the arms, legs and hands occurs in about 85 per cent of all cases, while loss of bladder control is experienced in 78 per cent. Visual disturbances were noticed in more than one-half or 58 per cent of all cases, with crawling sensations and tingling of the skin and speech difficulties, as well as quivering, occurring among less than one-half of the patients.

Multiple sclerosis is a progressive disease: it advances almost always from bad to worse. The Englishman D'Este complained in the beginning only of seeing things "double." But six years later he was virtually paralyzed and confined to bed. In more than 50 per cent of multiple sclerosis cases, however, the progression is erratic. The disease's course is often interrupted by remission, when the symptoms suddenly and mysteriously disappear or lessen. In at least one known case the remission lasted for 36 years, although the relief period is usually much shorter. In this way the disease is relatively stabilized at an earlier and more or less minor stage of disability, and paralysis never occurs in some few cases.

The symptoms of multiple sclerosis are produced by damage to the victim's central nervous system. What kind of damage occurs during the course of the disease? A spokesman for the National Multiple Sclerosis

Society gives us this description: Various areas of a fatty, whitish tissue, called myelin, which sheathes the nerves of the brain and spinal cord, quite mysteriously and slowly begin to disintegrate and disappear. It is generally thought that one of the most important purposes of this fatty tissue is service as "insulation" for the nerve fibers which carry nerve impulses.

The early and mild symptoms of multiple sclerosis are believed to be caused by this tissue destruction. The original myelin is replaced later by patches of scar or "sclerotic" tissues. Moreover, the nerve fibers themselves may be destroyed later. It is when scar tissue and destroyed nerve fibers apparently block nerve impulses from reaching their destination that the severest symptoms usually occur.

What else is known about multiple sclerosis? For one thing, the disorder attacks a fairly limited age group. It claims as its victims adults between the ages of 20 and 40. The disease rarely strikes children below the age of 10 and adults beyond the age of 50. Moreover, multiple sclerosis occurs three and one-half times as often in cold climates as in warm ones. However, there is no evidence that a move to a warmer region helps a victim once he has the disease.

What is the status of multiple sclerosis treatment? In the last century, the Englishman D'Este underwent treatments which have been described as "almost absurd tortures." The application of plasters to produce painful eruptions of his skin, attachment of leeches to his temples, and blood-letting were among the methods tried.

Today's treatment is indeed different from that available in D'Este's time. However, one specific treatment which can stop entirely the progress of multiple sclerosis has not been discovered. One doctor may, for instance, report some degree of success with a certain drug. But another doctor, using the same treatment, may find that it has no great value for his multiple sclerosis patients.

An inherent quality of the disorder itself is a stumbling block in the way of trustworthy evaluation of treatment. The often characteristic remissions or periods when the symptoms disappear are spontaneous and may be experienced by the patient without any treatment whatsoever. Thus,

when the remissions occur while the victim is receiving a certain drug, the treatment may mistakenly be given credit for the period of relief.

Medical treatment is most valuable for "managing" the symptoms of multiple sclerosis to some extent and perhaps to retard relapses. Adequate diets and rest, as well as mental relaxation, are usually recommended for patients. For evidence exists that both mental and physical strain can cause a recurrence of symptoms during remission periods. Or if not a relapse, such strains may intensify the pain and disability already suffered. Other treatment methods may provide the same sort of temporary relief.

Rehabilitation in multiple sclerosis is designed to help the patient make the best possible use of his remaining abilities, as well as the best adaptation to his disabilities. An important part of the rehabilitation program is muscle retraining. Damaged but still useful muscle may be stimulated to the limit of its possibilities. Moreover, other "unused" muscles can be stimulated or pushed into use—to take over the jobs of muscles impaired by the disease. Our spokesman for the National Multiple Sclerosis Society tells us that specialized exercises in the "activities of daily living"—such as walking, eating, drinking and dressing—may well mean the difference between a completely disabled patient and one who attains no small degree of self-sufficiency. And vital to the rehabilitation effort is the importance of stimulating the patient's motivation: the way the patient feels about his disorder decidedly influences his progress.

There are some good reasons why the multiple sclerosis patient today can adjust to his disability perhaps more than persons disabled by other disorders. First of all, the disease is hardly ever fatal. In fact most of its victims enjoy a normal life span. Moreover, except during the late stages, the condition does not greatly incapacitate the patient. Thirty-four per cent of a large group of patients who had multiple sclerosis for 15 years were working, while 43 per cent of them were able to walk.

The diary of the English nobleman D'Este reveals that he was a lonely and isolated sufferer. But today's multiple sclerosis victim is not alone. He has much help—the aid and assistance of voluntary and public

agencies and organizations. Some voluntary organizations have as their goal the support of local diagnostic and treatment facilities and the support of research into the disease.

So strong is today's research attack on multiple sclerosis that one authority could say the discovery of the cause and cure is no longer just a remote possibility. There is no reason to think that science will not do for multiple sclerosis what it has already achieved in the battle against such infectious diseases as syphilis and pneumonia. Multiple sclerosis research is difficult: it is not possible, for instance, to observe the living brain or spinal cord as nerve fibers and tissue slowly disintegrate. Neither has it been an easy matter to observe the disease process in an experimental animal, because the multiple sclerosis which has been produced in these animals differs in important respects from the human type. Nevertheless, science will continue to follow the "clues" for the cause, so that multiple sclerosis can be eliminated or at least controlled.

Tubeless Gastric Analysis Method Outlined—

For some time physicians have been looking for a simple, accurate way of determining the lack of normal acidity in the stomach without making the patient swallow a tube for this diagnostic procedure.

Now two Chicago physicians have used successfully a method that required no tube. They said in the December Archives of Internal Medicine, published by the American Medical Association, that the method is simple, accurate, and easily adaptable for office use and mass screening.

The presence or absence of hydrochloric acid in the stomach is of importance in diagnosing various gastric disorders, they said. The absence of the acid also is one of the signs of pernicious anemia.

The standard tube procedure is not performed with many patients for several reasons, including the reluctance of patients to swallow a tube, they said.

The doctors first gave the standard test to 84 patients. They then gave the new test, which consists of swallowing an organic dye, azure A ion-exchange compound, and water. Urine samples were taken one and two hours later. A color test of the urine indicated the presence or absence of acid.

Eighty-two of the 84 patients who had shown hydrochloric acid with the standard test were identified correctly by the new method. Twenty patients who were known to have no acid also were identified correctly by the new method, the physicians said.

Their experience with the dye method confirms earlier findings by other physicians that it is a satisfactory way of determining stomach acidity.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director
SPECIMENS EXAMINED

November 1955

Examinations for diphtheria bacilli and Vincent's	585
Agglutination tests	625
Typhoid cultures (blood, feces and urine)	662
Brucella cultures	1
Examinations for malaria	81
Examinations for intestinal parasites	2,267
Darkfield examinations	7
Serologic tests for syphilis (blood and spinal fluid)	21,396
Examinations for gonococci	1,324
Examinations for tubercle bacilli	3,104
Examinations for Negri bodies	66
Water examinations	1,743
Milk and dairy products examinations	4,624
Miscellaneous examinations	2,630
Total	39,115

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director
CURRENT MORBIDITY STATISTICS
1955

	Oct.	Nov.	E. E.* Nov.
Typhoid and paratyphoid fever	7	3	2
Undulant fever	2	0	3
Meningitis	6	7	9
Scarlet fever	61	76	76
Whooping cough	79	79	51
Diphtheria	58	44	51
Tetanus	1	3	4
Tuberculosis	253	166	189
Tularemia	0	0	1
Amebic dysentery	1	0	1
Malaria	0	0	11
Influenza	211	291	151
Smallpox	0	0	0
Measles	26	22	73
Poliomyelitis	25	6	14
Encephalitis	1	1	0
Chickenpox	8	47	62
Typhus fever	3	2	1
Mumps	54	91	28
Cancer	644	503	325
Pellagra	1	1	1
Pneumonia	194	147	125
Syphilis	190	163	526
Chancroid	5	1	10
Gonorrhea	395	375	340
Rabies—Human cases	0	0	0
Positive animal heads	18	18	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS FOR SEPTEMBER 1955, AND COMPARATIVE RATES

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During September 1955			Rates (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	7502	4640	2862	28.2	28.8	28.8
Deaths	1958	1229	729	7.4	7.3	7.8
Fetal deaths	150	74	76	19.6	20.6	23.0
Infant deaths—						
under one month	167	93	74	22.2	21.9	20.7
under one year	205	105	100	27.3	29.2	28.7
Cause of Death						
Tuberculosis, 001-019	23	13	10	8.6	13.3	15.0
Syphilis, 020-029	6	3	3	2.2	3.4	4.2
Dysentery, 045-048						0.4
Diphtheria, 055	4	2	2	1.5		
Whooping cough, 056	2		2	0.8		
Meningococcal infections, 057					0.4	1.2
Poliomyelitis, 080, 081	2	2		0.8	0.8	1.9
Measles, 085						
Malignant neoplasms, 140-205	254	176	78	95.4	100.2	102.1
Diabetes mellitus, 260	13	7	6	4.9	6.8	7.3
Pellagra, 281	1		1	0.4	0.4	1.2
Vascular lesions of central nervous system, 330-334	259	162	97	97.2	94.5	109.7
Rheumatic fever, 400-402	5	4	1	1.9	0.4	1.5
Diseases of the heart, 410-443	632	414	218	237.3	222.9	227.2
Hypertension with heart disease, 440-443	124	49	75	46.6	50.5	56.4
Diseases of the arteries, 450-456	40	30	10	15.0	12.5	12.7
Influenza, 480-483	6	6		2.2	1.1	0.8
Pneumonia, all forms, 490-493	35	22	13	13.1	14.4	16.1
Bronchitis, 500-502	3	3		1.1	2.3	0.8
Appendicitis, 550-553	3	2	1	1.1	1.1	1.5
Intestinal obstruction and hernia, 560, 561, 570	9	5	4	3.4	5.7	3.4
Gastro-enteritis and colitis, under 2, 571.0, 764	13	2	11	4.9	4.6	4.6
Cirrhosis of liver, 581	15	12	3	5.6	5.3	3.4
Diseases of pregnancy and childbirth, 640-689	7	2	5	9.1	10.3	10.4
Congenital malformations, 750-759	27	13	14	3.6	3.8	3.3
Accidents, total, 800-962	112	79	33	42.1	53.2	63.7
Motor vehicle accidents, 810-835, 960	65	49	16	24.4	25.4	31.8
All other defined causes	418	244	174	157.0	145.1	155.8
Ill-defined and unknown causes, 780-793, 795	69	26	43	25.9	30.7	28.4

*Rates: Birth and death—per 1,000 population; Infant deaths—per 1,000 live births; Fetal deaths—per 1,000 deliveries; Maternal deaths—per 10,000 deliveries; Deaths from specified causes—per 100,000 population.

AMERICAN MEDICAL ASSOCIATION NEWS

**DRUGS HAVE LITTLE EFFECT ON
"MORNING SICKNESS"**

Most drugs have little specific effect, except psychologically, upon "morning sickness" in pregnancy, according to a report by the American Medical Association's Council on Pharmacy and Chemistry.

The report appears in the *Journal of the American Medical Association* for Jan. 21.

The commonly used antihistaminic and anti-motion-sickness drugs "appear to be no more effective" in simple nausea and vomiting than placebos, substances given as substitutes for real drugs, the report said.

Any effect can be attributed to a sedative action of the drugs rather than to any specific inhibition of nausea or vomiting, it said.

There is a lack of definitive knowledge about the cause of nausea and vomiting in pregnancy. It appears that the physiological changes of pregnancy may cause it, but "there is little question," that psychological factors play a major role, the report said. This often has been given as the explanation for the beneficial results reported after psychotherapy, administration of placebos, and the use of unrelated drugs.

Two types of nausea and vomiting are associated with pregnancy. The mild form, commonly observed during the first 14 to 16 weeks of pregnancy, is characterized by some disturbance of appetite and reactions to food in approximately 25 to 30 per cent of pregnant women. It may vary in severity from slight morning nausea to occasional vomiting, but it is not accompanied by any signs of disturbed nutrition.

The other type, pernicious vomiting, is characterized by excessive vomiting and nutritional disturbances. If it is not stopped, it may result in neurological changes, liver damage, eye hemorrhages, and kidney damage. However, pernicious vomiting rarely occurs, the report said. Most patients with it are under mental stress suggested by or related to the pregnancy.

Recommended treatment for the mild form includes adequate rest, lightening of household burdens, avoidance of nervous excitement, and the eating of frequent small meals high in carbohydrates. In addition,

mild sedatives may be used. The patient should be reassured that the condition is not serious and the symptoms generally will disappear by the end of the 16th week, the report said.

Pernicious vomiting requires hospital treatment to overcome the effects of disturbed nutrition by intravenous or intramuscular administration of nutrients and vitamins. This, plus quiet surroundings, sedation, and reassurance, should break the cycle of vomiting, the report said.

The new drug chlorpromazine (Thorazine) has shown considerable promise in stopping pernicious vomiting, but because it may cause serious side effects, it should not be used for the mild form, the report said.

Blood Test Used to Diagnose Myocardial Infarction—A blood test which measures the amount of an enzyme normally abundant in the heart muscle may be used to diagnose one type of heart failure, five Los Angeles researchers said recently.

The heart condition is acute myocardial infarction, in which heart muscle cells die when a blood clot shuts off their blood supply.

The Los Angeles scientists found that the blood level of aminopherase, also known as transaminase, increases when an infarction occurs. Aminopherase is one of the enzymes or body catalysts. It makes changes in the amino acids. The breaking down of the heart muscle cells apparently releases the enzyme into the blood.

A rise in the blood level of aminopherase occurred in 13 of 14 patients with proved cases of myocardial infarction, they said in the Jan. 7 *Journal of the American Medical Association*.

Because the peak amount of the enzyme is reached about two days before the peaks of other conditions generally studied for diagnosing an infarction, the aminopherase method may be valuable in speeding diagnosis, they said. The test also may be used in cases in which the electrocardiogram fails to show heart damage.

The level of aminopherase in the blood usually begins to rise from six to 12 hours after the infarction occurs and the peak is reached in 24 to 36 hours, followed by a decline to normal by the fifth or sixth day.

Other heart disorders apparently do not produce any changes in the amount of the enzyme in the blood, they said. However, liver disease produces a rise in the enzyme level, but the peak is delayed for 13 to 18 days.

Other researchers have noted a quantitative relationship between the aminopherase level and the extent of the damage to the heart in dogs. Whether this is true of humans has yet to be proved, the authors said.

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DOCTOR, LAWYER, AND PATIENT

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Birmingham, Alabama

Most of us who are engaged in the practice of medicine regard the necessity for rendering legal testimony as an imposition on our time and our patience. If we had the choice we should probably elect never to be involved in a court case. Unfortunately, the choice is not ours, and each time that we treat a patient we become a potential medical witness. This is becoming increasingly more likely, for our population is becoming ever more "suit-conscious," particularly that segment of our patient population who are injured on the job. The explanation for this trend stems from a combination of causes. Part of the fault lies in the ready availability of the "plaintiff's lawyer." Part of the fault in some cases undoubtedly lies with the company claim agent. Perhaps the most important factor, however, is a changing philosophy in this country to the effect that gaining something for nothing has become a common objective in one's daily existence; in the pursuit of this objective, one's employer, an insurance company, or a branch of government is considered fair game. Facing, as we do, this trend toward increasing numbers of lawsuits, each of us is obligated to interest himself in medicolegal matters to the end that we may contribute our fair share to the dispensing of justice.

Medicine and the law have been closely linked throughout the ages. Information available to us regarding the earliest civilizations of Babylon, Egypt and India, fragmentary though it is, tells us plainly that there was, as early as 3000 B. C., an interdependence between the two professions. There were laws governing medical education and dictating who should be qualified to practice. On the other hand, medical

opinion was instrumental in formulating laws of social relations, such as establishing the minimum age at which a girl was considered marriageable and defining the limits of the period of gestation, which was then fixed at a minimum of 9 lunar months, and no maximum limit was established. From these early beginnings there evolved the science of forensic medicine. This has been defined by Gradwohl, Director of the Police Laboratory in St. Louis, as that body of medical and paramedical scientific knowledge which may be of service in the administration of the law. Forensic medicine is a specialty in itself, and we shall not concern ourselves with the details of this science. As practitioners of medicine, however, we are all possessed of knowledge which "may be of service in the administration of the law." Our function in this field is not judicial but advisory. This was set forth quite clearly in the old Justinian Code of the Romans between 529 and 564 A. D. The code observed "*Medici non sunt proprie testes, sed majus est judicium quam testimonium.*" Freely translated this dictum means that the medical expert is not used to greatest advantage if he appears for one side or for the other side as an ordinary witness; his function is rather to assist the judiciary by impartial interpretation and opinion based on his specialized knowledge.

Now those of us who see a large number of industrial patients, that is, patients who become ill or injured while at work, are especially likely to be frequently called as medical witnesses. In such cases it is found that more often than not the physician who has been treating the patient offers testimony that appears to favor the employer rather than the patient. As a consequence,

the term "Company Doctor" has come to carry the connotation in the courts that the doctor is loyal to the company who employs the patient. This impression must be emphatically corrected, for by the very nature of his professional training and character the doctor is fundamentally loyal to his patient. It must be clearly recognized that the physician's primary obligation is to diagnose the patient's condition as accurately as possible, to offer him the best treatment possible, and to evaluate as accurately as possible the final result, regardless of whether the patient seeks out the physician of his own choice or is sent to him by his employer, who pays the bill. If this much is true, why then does the testimony of the company doctor so often favor the company rather than the patient? The reason is simple. By and large the final medical evaluation of a patient is accepted by the employer as the basis for settlement. If this evaluation meets with the patient's approval, as it often does, the case rarely goes to court. If it fails to meet the patient's approval and reaches the court, it is only natural that medical testimony will be contrary to the patient's interest. I think that, in general, few cases reach court when physician and patient are in agreement.

One point I should like especially to emphasize: the natural physician-patient relationship must not be disrupted by outside influences. It behooves the attending physician so to conduct himself as to gain the unquestioned confidence of his patient. This is sometimes quite difficult, particularly when the diagnosis is not clear-cut, when the symptoms assume a bizarre pattern, and when the complaints change from day to day. The difficulty may be compounded by an interim visit by the patient to his family doctor, by conversations with well-meaning lay friends, or by a tentative consultation with an attorney. Further confusion may be added by an eager foreman or supervisor who presses for an early return to work, or by an overzealous claim agent who seeks an early settlement. To overcome these various distractions, one's patience is often sorely tried. However, by the exercise of patience, by willingness to listen to complaints, and by the employment of firmness and frankness, the physician can, in most instances, arrive at a proper solution to the patient's problem.

A carefully considered final evaluation of a case is a prerequisite to a just settlement.

It has been asserted by Theodore Curphey, Chief Medical Examiner for Nassau County, New York, that much of the expert testimony presented in court is of decidedly low quality, reflecting no credit to either medicine or the law. Curphey goes on to say, in a recent article to which I shall make frequent reference, that forensic medicine, by its medicosocial nature, represents an area which is ripe for further development at this time, and one which will command increasing attention in the future.

Leaders in the legal profession apparently are in agreement with this opinion for in the past few years there have been springing up, in increasing numbers, conferences, clinics, and postgraduate seminars on medicolegal matters. Although these assemblies are sponsored in many cases by both professions, it is my distinct impression that the moving force in each case is the legal institution and that its medical counterpart simply participates when invited. Examples of such conclaves in recent years have been a Symposium on Trauma, arranged by the Joint Committee on Medicolegal Problems of the Baltimore and Maryland Bar Associations; a Conference on Expert and Technical Testimony at the University of Michigan; a Law-Science Short Course on Personal Injury Problems and Medicolegal Trial Technique, presented by the Law-Science Institute of the University of Texas; and a Medical-Legal Clinic at the University of Alabama, again *sponsored* by the State Bar Association and the School of Law, *assisted* by the Medical School. An exception to this statement is the American Academy of Neurosurgery. This organization two years ago introduced a symposium on a medicolegal subject as an integral part of its annual scientific meeting.

It has been said by critics of such medicolegal conclaves that they are designed to provide the Plaintiff's Lawyers with "the little knowledge" which might prove dangerous to the defense. Although I do not subscribe to the view that these medical-legal conferences are all bad, I do feel that thus far they work to the advantage of the plaintiff, chiefly because, I fear, the physician and the attorneys for the defense have not manifested much interest. I must say that, as I read the program of the recent meeting in Texas, I was struck by the fact

that the leaders in the various panels and mock-trials were some of the country's most prominent and ambitious compensation lawyers, some of whom have recently won some very large judgments for their clients. Another observation, and this I think is really significant, is that at the Medical-Legal Clinic held at the University of Alabama, I saw many lawyers but no doctors except those participating in the program.

If these observations mean anything, it is that the legal profession is outstripping the medical in advancing their knowledge in this mutual field. It seems to me that it is time for us to take a realistic view of the situation. Instead of feeling a smug superiority in matters as earthy as the witness chair, it behooves us to fortify ourselves in every possible way in order that our opinions can be most effectively presented and upheld.

The first phase of preparation of a medico-legal case has to do with the making and maintaining of complete clinical records on all patients. Of course, this is a professional discipline that constitutes an established part of good medical care without respect to its medicolegal value. When one realizes that in many instances a given case may come to trial two, three, or more years after our last contact with the patient, it is apparent that our memory must be supplemented in great part by records. Indeed it is probable that after the lapse of a long period of time the entire factual testimony should be made from the record alone. With this in mind, we must prepare records which are complete in every detail. With regard to the original visit, a careful history of the present illness or accident is of course essential. Perhaps of equal importance is a searching probe of the past history because of its possible relation to the current problem. It goes without saying that the initial examination should be complete, and not limited to the system or area involved in the patient's presenting complaint. On subsequent visits accurate records must be made of each new complaint and different physical finding, as well as of the progress that is being made. In cases that are long and complicated, it is especially important that a review of the entire case be made at intervals and a summary of the findings recorded. In the end, when the patient is to be dismissed, a final evaluation of the case should be recorded after a discussion

with the patient of his problem. I think it extremely important that both patient and doctor understand one another clearly before the patient is discharged. More often than not, if suit is to be brought, the legal machinery is in motion long before medical management is terminated. This, of course, makes the physician's problem more difficult, as the patient is then under direction of his legal counsel, and has long since ceased thinking or speaking for himself.

Having made careful and accurate records throughout our patient's course of treatment, we should utilize these to best advantage in court. I am in complete agreement with Curphey that, in general, altogether too little care is given to the medical preparation of a medicolegal case. Having followed the patient closely throughout his illness, the attending physician is in more favorable position than anyone else to evaluate accurately the patient's condition, and to present most authoritatively his opinion as to this condition. This position of authority will, however, be completely nullified if the physician fails to take the time, prior to the trial, to review the records, assemble the pertinent facts in orderly manner, and, when indicated, to review the medical literature on certain pertinent phases of the case, particularly on subjects which may be controversial. In order best to accomplish these matters, the attending physician should be notified as soon as it becomes known that a suit has been filed in which he is likely to be called as witness. Immediately a preliminary interview between attorney and doctor should be arranged, in order that the attorney may acquaint himself on good authority with the medical opinion. He can only then determine whether and to what degree the opinion and testimony of the doctor will support his client. In this preliminary interview the lawyer can become acquainted with certain medical facts of the case, can learn what facts the medical witness can assert with conviction, what opinions are controversial, and can decide whether the physician will prove a strong advocate for his side. At this interview the attorney can also acquaint the physician with certain phases of the case which he considers of importance. Together they can anticipate the trend of the cross-examination to which the medical witness may be subjected. In most cases a final interview between at-

torney and medical witness will likewise prove worth while, inasmuch as additional study of the case by both may have brought to light certain phases of the case not evident initially. These interviews should not be held over the telephone. It is false economy of time and a totally erroneous concept to suppose that a hurried telephone conversation can be a fitting substitute for a personal interview scheduled by appointment. More likely than not a telephone call will find the physician both hurried and harried, not having the records of the case at hand, and perhaps having a patient across the desk from him. Such an atmosphere is not calculated to gain from the physician full attention or complete sympathy. Lawyers complain, and with justification, of the difficulties they have in persuading doctors to set aside time for interviews. This has undoubtedly been true in the past, but, as I have said, it behooves the medical profession to alter its attitude toward medicolegal affairs, for they are now a very definite part of our professional life. Some attorneys for industry, after studying the problem, have advocated conferences with medical witnesses prior to the trial on a consultation basis; they further advocate that such conferences be adopted as standard trial preparation procedure. Such conferences, I am sure, would serve to stimulate the doctor's interest in the given case and spur him to present a strong stand for his opinion.

In his testimony on the witness stand the medical witness must impress one with his objectivity and impartiality with regard to plaintiff or defendant, while at the same time he must be eager to present forcefully and to maintain in the face of cross-questioning his convictions on a given subject. This demands considerable reserve and dignity on the part of the witness, qualities that are often extremely difficult to preserve in the face of harassing cross-fire on the part of the attorney holding a contrary view. To accomplish this the witness must be prepared (if you will allow me to paraphrase a simile drawn by Shakespeare) "to sit like Patience on the witness chair smiling at his challenger."

It is most unfortunate that the referral of a personal injury case to trial does not by any means assure the disputants of a just verdict. Indeed, the current practice of questioning and cross-questioning of medical experts, several of whom may be called in any case, is calculated, it seems to me, hopelessly to confuse a jury. It is my private opinion that, so far as medical testimony is concerned, justice could be better served by a conference before an arbiter in a quiet office attended by attorneys and by the medical witnesses involved.

I am fully aware that there are physicians who make a career of legal testimony, these doctors being much sought after by certain types of lawyers. Both attorney and physician fall in the same general category of "ambulance chasers," and both, we must all agree, are exceptions to the rule in two honorable professions. Most of us, I am convinced, are interested in doing our part to assist in a fair settlement in medicolegal disputes. Any discussion of the subject must be based on the premise that employer and employee are both interested in a just settlement. The fact that a settlement cannot always be achieved outside the courts is due to different points of view and to the fact that disease and disability cannot be measured by a mathematical formula.

Sun Tan Ointments May Cause Dermatitis—

Preparations to protect the skin from sunburn may actually cause inflammation, a Florida dermatologist said recently.

Dr. Wiley M. Sams, Miami, said the preparations themselves are harmless to the skin, but in the presence of direct sunlight sometimes cause redness and eruptions of the skin.

Lime oil, bergamot oil, some perfumes and toilet waters, and some derivatives of tannic acids have caused known reactions among Dr. Sams' patients. Other southern dermatologists also are seeing cases of "contact photodermatitis" with increasing frequency, he said.

What apparently happens is that the preparations, while protecting the skin from the "sunburning" light rays, produce a chemical reaction in the skin which sensitizes it to other light rays. Routine "patch" tests with the same preparations but without exposure to sunlight fail to produce any reactions in most cases, he said.

ESOPHAGEAL ATRESIA WITH TRACHEO- ESOPHAGEAL FISTULA

JOHN W. DONALD, M. D., F. A. C. S.

and

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Congenital esophageal atresia with tracheo-esophageal fistula has always been an extremely difficult problem. This abnormality was uniformly fatal throughout the world prior to 1939. During the years prior to 1939, various multiple-stage operations were performed in an attempt to correct this condition. In 1939, Ladd¹ and Leven² independently and almost simultaneously performed the first successful multiple-stage operation for this anomaly. In 1941, Haight³ performed the first successful end-to-end anastomosis for esophageal atresia. Since then, numerous successful primary anastomoses have been reported. When the distance between proximal and distal esophageal segments is too great for primary anastomosis, various other multiple-stage procedures have been successful in recent years. These methods have been developed chiefly by Potts,⁴ Longmire,⁵ and Sweet.⁶

ANATOMY

There are five major anatomic variations of esophageal atresia. The most common type is for the proximal esophagus to end

in a blind pouch and for the distal esophageal segment to communicate with the trachea near the bifurcation. All of the patients to be reported here had this type of anomaly.

DIAGNOSIS

The diagnosis of atresia of the esophagus should be suspected when a baby is found to have excessive nasopharyngeal secretions, and becomes cyanotic with the aspiration of these secretions. The initial feedings are often forcibly ejected through the nose and mouth. Passage of a soft rubber catheter through the nose into the upper esophagus will confirm the diagnosis. An obstruction will be met just below the clavicle if atresia is present. Injection of a small amount of radiopaque oil will usually give confirmatory evidence of the atresia as demonstrated by x-rays. Barium should not be injected because of the danger of aspiration. If atresia is present, and if air is noted in the gastro-intestinal tract, a fistula between the distal esophageal segment and the tracheobronchial tree is also present.

One of the major complications of this anomaly and the usual cause of death in undiagnosed cases is aspiration pneumonia. The chance of successful treatment naturally is much greater when the diagnosis is made early.

We have encountered three patients with this condition during the past five years. All three had the same anatomic type of anomaly. The proximal esophageal segment ended in a blind pouch and the distal segment communicated with the trachea.

CASE REPORTS

No. 1—A. B. This female infant weighed 5 lbs., 6 oz., and was delivered at 3:00 A. M. on June 20th, 1950. She was observed to have excessive mucus and choking. Attempts to take water resulted in immediate regurgitation of the water through the nose and mouth, and the baby became cyanotic. Eleven hours after birth, x-rays taken after injection of lipiodol through a small rubber catheter in the esophagus showed atresia of

1. Ladd, W. E.: Surgical Treatment of Esophageal Atresia and Tracheo-Esophageal Fistula, *New England J. Med.* 1944, 230: 625.

2. Leven, N. L.; Varco, R. L.; Lannin, B. G., and Tongen, L. A.: The Surgical Management of Congenital Atresia of the Esophagus and Tracheo-Esophageal Fistula, *Ann. Surg.* 1952, 136: 701.

3. Haight, C., and Towsley, H. A.: Congenital Atresia of the Esophagus with Tracheo-Esophageal Fistula; Extra-Pleural Ligation of Fistula and End-To-End Anastomosis of Esophageal Segments, *Surg., Gynec. and Obst.* 1943, 76: 672.

4. Potts, W. J.: Atresia of Esophagus With or Without Tracheo-Esophageal Fistula, *Postgrad. Med.* 1951, 10: 304.

5. Longmire, W. P., Jr.: Antethoracic Jejunal Transplantation for Congenital Esophageal Atresia with Hypoplasia of the Lower Esophageal Segment, *Surg., Gynec. and Obst.* 1951, 93: 310.

6. Sweet, R. H.: New Method of Restoring Continuity of Alimentary Canal in Cases of Congenital Atresia of Esophagus with Tracheo-Esophageal Fistula Not Treated by Immediate Primary Anastomosis, *Ann. Surg.* 1948, 127: 757.

the esophagus. Moderate amounts of air in the stomach and small intestine indicated a communication between the distal esophageal segment and the trachea. A few hours after the diagnosis was established, operation was performed. A posterior extra-pleural approach was made on the right side. The fistula was divided and closed, and an end-to-end anastomosis was made between the proximal esophageal pouch and the distal segment. Two days later a gastrostomy was performed for feeding the infant. On the fifth postoperative day, a small fistula from the anastomosis was apparent. Because of this, oral feedings were not allowed until the eighteenth day. During this time the baby was maintained in good condition with gastrostomy feedings. The fistula closed, and on the forty-sixth day the gastrostomy tube was removed, and the child was discharged from the hospital two days later. She required esophageal dilatation on one occasion during the first year of life because of some narrowing at the anastomotic site. Since then, however, she has remained completely well, developed rapidly, and is now a normal five year old child.

No. 2—D. N. This female baby weighed only 4 lbs., 8 oz. She was born on Decem-

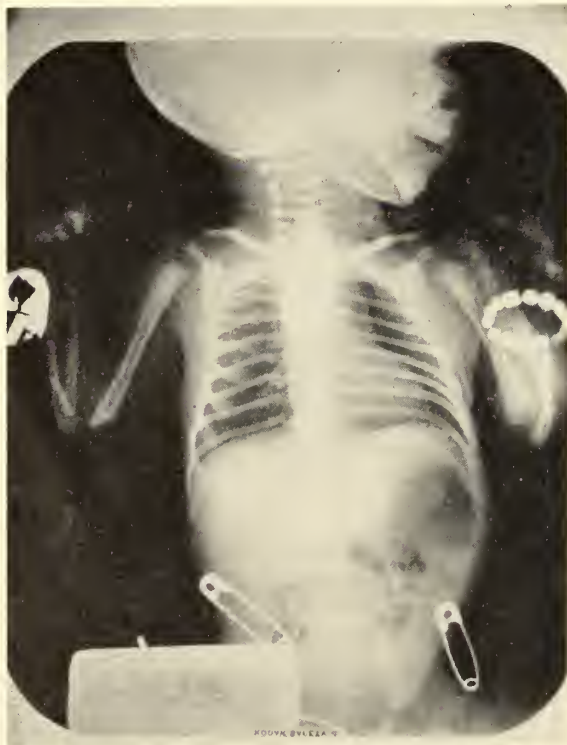


Fig. 1. Case No. 1—Preoperative x-ray showing esophageal atresia.



Fig. 2. Case No. 1—Postoperative barium swallow taken 10½ months after operation.

ber 1, 1953, in another city. Increased amounts of mucus and choking had been noted since birth, and she had regurgitated all feedings. Cyanosis had been noted after aspiration of the secretions and feedings. She was transferred here when three days of age, and her condition was surprisingly good. This was probably due to the fact that she had received parenteral fluids and penicillin. X-ray study showed esophageal atresia and the stomach was tremendously dilated with air. A few hours after admission, operation was performed. Because of the dilatation of the stomach, preliminary gastrostomy was performed using local anesthesia. It was felt that decompression of the stomach would improve the respiratory condition during the thoracic procedure. The baby was then anesthetized, utilizing an endotracheal tube, and a right sided transpleural approach was used. The tracheo-esophageal fistula was divided and sutured and the two ends of the esophagus were united by means of an end-to-end anastomosis. The anastomosis was performed according to the technique recommended by Gross.⁷ This baby made an ex-

7. Gross, R. D.: *Surgery in Infancy and Childhood*, London, Philadelphia: W. B. Saunders Co., 1953.

tremely smooth recovery and was taking oral feedings on the eighth postoperative day. The gastrostomy tube was removed on the twenty-sixth day and the baby discharged on the twenty-eighth day. She has not required dilatations and has developed normally.



Fig. 3. Case No. 2—Preoperative film showing dilated proximal esophageal segment with complete atresia.

No. 3—P. D. This male infant weighed 5 lbs., 8 oz., and was born on February 16th, 1955, at another hospital. It was noted that the baby regurgitated all feedings and had recurrent bouts of cyanosis and respiratory difficulty after attempted feedings. He was transferred here on February 19th, 1955 (three days after birth) weighing 4 lbs., 11 oz. X-rays with a small catheter in the esophagus and injected iodized oil revealed complete atresia of the esophagus. There was considerable air in the stomach and intestines. After six hours of preparation with parenteral fluids and antibiotics, operation was carried out. A transpleural approach was made and the tracheo-esophageal fistula was divided and sutured. An end-to-end anastomosis was then made between the proximal esophageal pouch and the distal segment. Following the thoracic procedure, a gastrostomy was per-

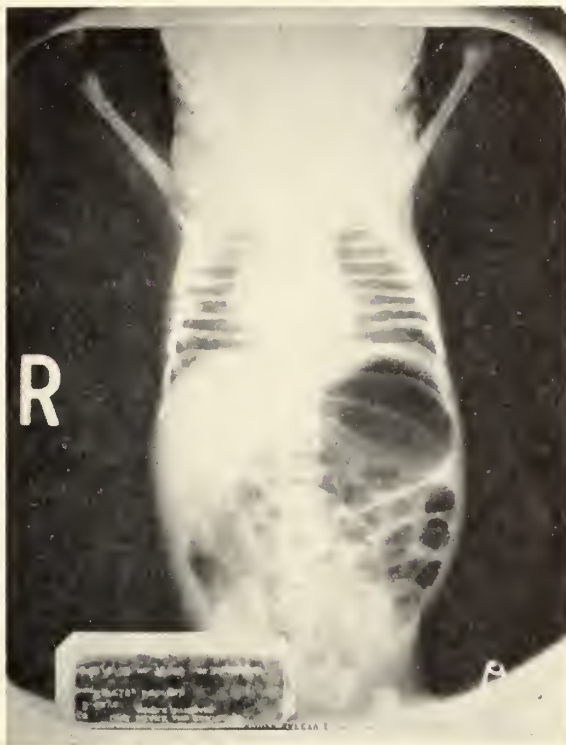


Fig. 4. Case No. 2—Preoperative x-ray showing considerable dilatation of stomach with air.



Fig. 5. Case No. 2—Postoperative x-ray taken on 10th postoperative day showing a patent esophagus. The lipiodol seen in the tracheo-bronchial tree is due to aspiration.

formed. The gastrostomy feedings were started on the third day, but these were not well tolerated. The baby had frequent bouts of vomiting and developed some pneumonitis. During the next ten days the baby's feedings had to be supplemented with parenteral fluids. The patient's condition during this time was poor, but gradually, during the following two weeks, he improved and was taking oral feedings well and gaining weight at the time of discharge on April 13th, 1955. X-rays taken on the 7th postoperative day after injection of a small amount of lipiodol showed no obstruction to the opaque media through the esophagus. There was very slight narrowing at the site of anastomosis. Since discharge from the hospital, the baby has done well except for occasional episodes of "bronchitis."

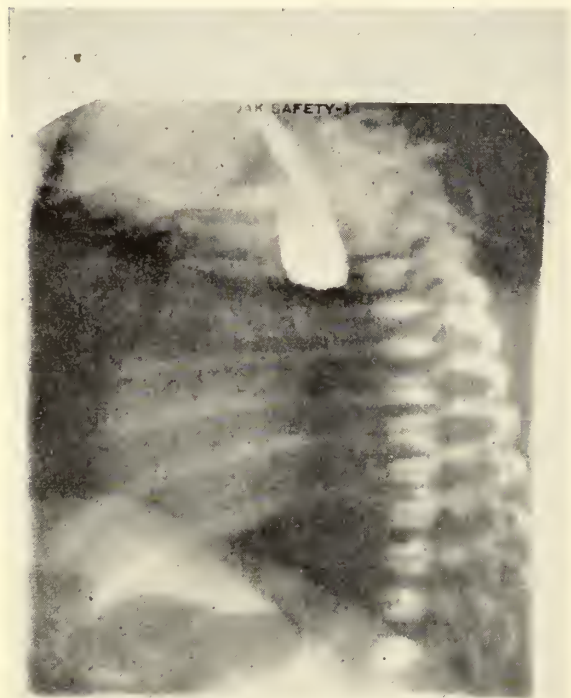


Fig. 6. Case No. 3—Preoperative x-ray showing esophageal atresia.

COMMENT

Early diagnosis and prompt treatment of this condition is of the utmost importance in obtaining a successful result. If not treated, these infants will invariably die, and death is usually due to aspiration pneumonia. This congenital anomaly is seen most often in premature and small babies and, because of this, their management is more difficult. In the first case reported, we utilized a retropleural ap-

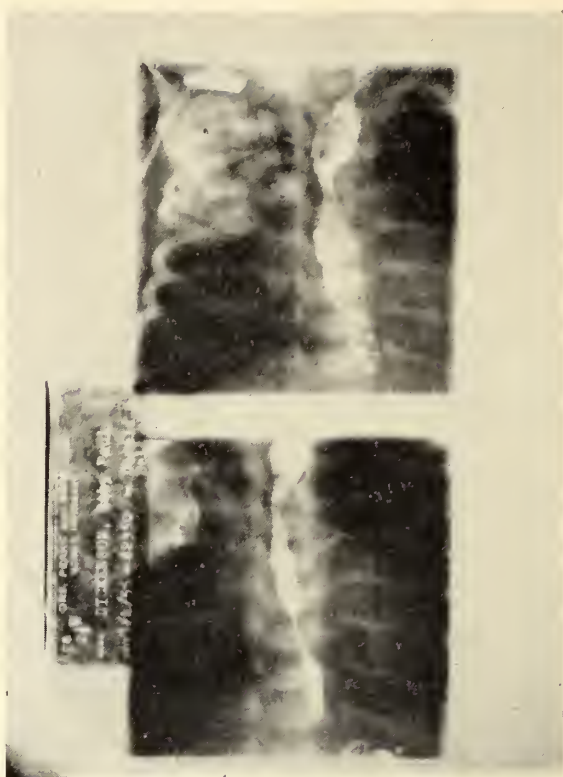


Fig. 7. Case No. 3—Postoperative lipiodol study on the 13th postoperative day showing patent esophagus.

proach to the esophagus, whereas in the last two cases a transpleural approach, as advocated by Koop,⁸ was made. We feel that the transpleural approach is far superior. It allows much better exposure and, therefore, there is less chance of an anastomotic leak since the repair can be done more meticulously. With proper anesthesia, these infants tolerate the open pleural cavity quite well.

There are various opinions in the literature regarding the advisability of gastrostomy. This was performed on all of our cases, and we feel that it contributed to the successful results. Bigger⁹ has recommended a preliminary gastrostomy if the findings indicate that a primary anastomosis is possible. In one of our patients the gastrostomy was performed just before the major thoracic operation. This was done because the stomach was greatly distended and we

8. Koop, C. E.; Kiesewetter, W. B., and Johnson, Julian: Treatment of Atresia of the Esophagus by the Transpleural Approach, *Surg., Gynec. and Obst.*, 1954, 98: 687.

9. Bigger, I. A.: The Treatment of Congenital Atresia of the Esophagus with Tracheo-Esophageal Fistula, *Ann. Surg.* 1949, 129: 572.

felt that the respiratory condition would be improved by decompression of the stomach. This proved to be correct, and, of course, the gastrostomy was used for feedings during the first week postoperatively. Following removal of the gastrostomy tube, spontaneous closure usually occurs, and a secondary operative closure is not necessary. The gastrostomy seems to be one slight additional safety factor which can be utilized in the management of this difficult problem. This is quite important when it is realized that, in spite of all new techniques and methods of improved management of this

condition, the mortality rate averages about 40%.

SUMMARY

The congenital abnormality of esophageal atresia with tracheo-esophageal fistula has been briefly discussed. We have operated upon three patients with this condition during the past five years, and these are reported in moderate detail. The transpleural approach seems to offer definite advantages over the retropleural method, but both methods have proved successful in this small group of patients.

SPERMATOCELE

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Those who make routine careful palpations of the scrotal contents find an approximate clinical incidence of spermatocele to be about one in a hundred adults. A very large majority of these spermatocele cysts are unilateral and small. The reason the condition is overlooked in private and clinical practice is that the cyst, in the main, is of small size, is symptomless, and usually of no clinical importance. The patient is unaware of its presence and the clinician does not, as a rule, make a routine careful palpation of the scrotal contents unless specially indicated. Progression is usually slow and painless. When this condition is noticed by the patient, the spermatocele is usually of sufficient size to make him think he has a third testicle which had been overlooked up to the time of his discovery. In many cases when of appreciable size, the cyst is mistaken for hydrocele of the tunica vaginalis or cord, although spermatocele is far more frequent than chronic hydrocele.

Spermatocele is more common in men between thirty and fifty, although it is frequently seen in older men. There is no noticeable reduction in the size of the cyst following ejaculation, and the emitted semen, where we have been able to obtain it for microscopic examination, does not show a lessening of the number of spermatozoa, and all specimens so far examined have demonstrated active motile spermatozoa.

Spermatoceles arise in connection with the epididymis, either between the globus

major and the testicles or above the epididymis. We have never encountered a case in a patient who had previously undergone a ligation of his vas. They are retention cysts developed from certain of the seminiferous ducts, or from vestigial structures of wolffian duct origin. They are situated outside the tunica vaginalis, but may project into the cavity. They are usually single and unilocular, less often multiple; but they may be multilocular. As the cyst increases in size it separates the testicle and epididymis, and the vasa efferentia may be stretched over it. One with experience can readily make a diagnosis, in a case presenting, by a careful history, palpation, and the shining of a strong light through the cyst. Should there be any doubt after this procedure, proof can be readily established by puncture and aspiration and the finding of spermatozoa in varying numbers microscopically in the aspirated fluid. This aspirated fluid is never straw-colored, and we have never seen the fluid tinted with blood in any degree. The fluid's opaqueness varies, as well as its thick consistency. Globulin can be demonstrated but no albumin.

When the scrotum contains two structures, seemingly alike, one above the other and united by a broad base, the upper one is the spermatocele and the lower the testicle. An accepted predisposing factor in some cases of spermatocele is trauma, such as trauma of the epididymis producing an epididymocele. In such a situation the

lining membrane could become necrotic with contents of a seropurulent nature. Communication with the tubules of the epididymis would then allow the entry of spermatozoa, thus having a cavity of fluid of a degree of opacity and containing spermatozoa.

There are two views in regard to the pathology of these cysts:

(1) Retention cyst. Communication between the cyst and a seminal tubule has been proved by the injection of mercury into the vas deferens and the discovery of globules in the cyst. The opening into the duct will usually admit a fine bristle. According to some authorities, these cysts are due to rupture of one of the vasa efferentia.

(2) Multiple cysts of the epididymis. These are usually situated in the head of the epididymis, and less frequently in the body or tail. They form small pea-sized bodies projecting on the surface of the head of the epididymis; occasionally they may become pedunculated. The cysts are tense and firm, and contain a transparent or turbid fluid in which spermatozoa may be found. These cysts appear after puberty, and are more common after the age of forty. They are said to arise either in remains of the mullerian duct or from dilatation of the ducts of the epididymis.

The wall consists of fibrous tissue lined with columnar or sometimes flattened epithelium. The fluid is alkaline, opalescent, and milky, and when the glass containing it is swung around, the circulating fluid gives a remarkable drift-cloud or shimmering appearance similar to that seen in urine in bacilluria. The milkiness is due to spermatozoa, which are motile under the microscope. The spermatozoa are present at each tapping. Rarely, the fluid is colorless and no spermatozoa are present.

Treatment of this painless entity was difficult to be stabilized. Injection therapy fell into disrepute centuries ago due to the untoward painful processes set up by the extremely powerful sclerosing agents employed, together with secondary infection. True, results were obtained but in the mind of the clinician, and patient alike, at too great a price. So, the pendulum swung to open surgical correction to the exclusion of any other approach. Little headway was made as most of these cases presenting were thought by the patient to be a third testicle,

and like the Sudanese who will not let you photograph him for fear you not only take his picture but also take part of his life, his psychosexual viewpoint is that if you take his third testicle you also take some of his sexual potency.

In our hands, with the modern sclerosing agents, the injection therapy is the one of choice, but the patient has to be convinced that the tumor is not a third testicle. Aspiration of the contents of the sac, either before or at the time of the injecting, will do this.

I wish to report two cases which serve to establish most of the points mentioned in this paper.

H. E. S.—First consulted us in 1917 thinking he had a third testicle. We advised surgery as this was prior to the upsurge of injection therapy which occurred over a decade ago. He refused surgery, believing his condition a third testicle and as such it furnished its share of sexual power. He did not want a diminution or disturbance in his sexual life. We recently saw this man and he still believes he has a third testicle. He is now 76 years of age with beginning prostatism. The spermatocele which is on his left side is translucent to light and needs only aspirating to prove the diagnosis. This he refuses. We are unable to detect any further enlargement during the span of years we have seen him.

C. E. B.—This patient, age 57, came in stating that he had a third testicle. He gave a history of having noticed a spheroid enlargement within the right scrotal cavity some five years ago. This enlargement had slowly become larger and was symptomless. Examination showed a smooth tumor behind and above the testicle proper. It was translucent to light and the patient was told it was a spermatocele. The scrotal surface was surgically prepared and the cystic contents aspirated. The needle was left within the cavity and the syringe removed therefrom, while a microscopic examination of the fluid was made. Spermatozoa were abundant and very motile, confirming our preoperative diagnosis. Two cubic centimeters of quinine and urea hydrochloride solution were drawn into another syringe, the needle removed, and the syringe attached to the aspirating needle in situ and its contents injected into the cystic cavity. The needle was removed and the solution

diffused within the sac by gentle external manipulation. A collodion dressing was applied and the patient went about his way.

Five years later this patient came in with a similar condition on his left side. He delayed reporting as he had hoped that nature would take care of it. Similar findings and an almost identical history were obtained. The right side had never given any trouble since the previous therapy, and this therapy was duplicated on the left side.

This is the only case of duplication of spermatocele I have been able to find. The patient gave no history of pain or trauma in either of his presentations.

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4. Rolnick, Harry C.: The Etiology of Spermatocele, *J. Urol.* 19: 613-617 (May) 1928.

A. M. A. Board Commends President on Message—The A. M. A. Board of Trustees, meeting in Chicago recently, drafted a letter to President Eisenhower, commending him on the health and medical care programs set forth in his health message to Congress.

The letter, a copy of which was sent to Marion B. Folsom, Secretary of Health, Education, and Welfare, follows in full:

"The Board of Trustees of the American Medical Association unanimously voiced its approval of the principal health and medical care programs set forth in your recent Health Message to the Congress.

"Your recognition of the tremendous growth of voluntary health insurance and the recommended removal of existing legal restrictions to pooling efforts were most encouraging to us.

"Your recommendation with respect to medical research and medical education as embodied in H. R. 9013, 84th Congress, has been approved by the Board of Trustees. We are grateful that the objections which we raised to similar legislation last year have been considered in drafting the present bill.

"On your recommendation for a sickness survey we concur in your view that a survey should be made but recommend that it should be made at reasonable periodic intervals rather than as a continuing survey as suggested in H. R. 9014, 84th Congress.

"In our opinion the administration's health program is in general a sound approach to a solution of the problems in the health field. We pledge to you and the Congress our continued cooperation."

Sore Throat Treatment Changes Over Years—A man with a sore throat today is better off than George Washington was when he had one in 1799.

During his fatal illness, which began with a sore throat, in December of that year, Washington was treated with "the best" eighteenth century methods—"bleeding," the application of "blisters" to the neck, gargles, inhalations, cathartics, and immersion of his feet in hot water, Dr. Noah D. Fabricant, Chicago otolaryngologist, said recently.

Now treatment for sore throats includes antibiotics and sulfonamides for severe cases and the "time-tried" methods of complete bed rest, adequate amounts of fluids, salicylates for the control of fever, and irrigation of the throat with warm salt water for mild cases.

In Washington's day, the diagnostic method of chest thumping and listening was unknown and no one thought to examine his throat. His illness was diagnosed as "quinsy" and later as "cyanche trachealis," an indefinite medical term then in vogue for a severe sore throat that involved the vocal cords.

Although the exact diagnosis of his illness is a matter of dispute, it seems likely that a strain of streptococci organisms was responsible, Dr. Fabricant said in the current February *Today's Health*, published by the American Medical Association.

In past years complications from "strep sore throats" were common, but now antibiotics and sulfonamides are effective weapons against the terror of streptococcus infection, he said. "Strep throats" usually start suddenly, with chills and high fever. Some patients develop a skin rash, so that sometimes it is difficult to distinguish this disease from scarlet fever.

The "common, garden-variety" sore throat usually results from irritation or infection of the back wall of the throat or of the tonsils, he said.

Acute pharyngitis is caused by many different types of microorganisms and viruses. The symptoms include sensations of burning and scratchiness, a constant desire to clear the throat, painful swallowing, fever, headache, loss of appetite, and a dry, harsh cough.

In the acute stages, pharyngitis gradually wears itself out, but bed rest, adequate amounts of fluids, and salicylates are helpful. If the fever is or remains high, use of antibiotics and sulfonamides to prevent complications may be necessary, he said.

While gargling is popular, there is considerable doubt as to its value, Dr. Fabricant said. Experiments have shown that fluids fail to reach either the back of the throat or the tonsils, because the gargling causes the back of the tongue to meet the soft palate, closing off the back part of the throat. However, it is possible to irrigate that part of the throat with a syringe.

Various studies have shown that ordinary mouth washes "can do no more than wash," he said. They are in contact with the infected area far too short a time to kill the bacteria and viruses.

As in acute pharyngitis, antibiotics and sulfonamides have taken the "sting" out of tonsillitis. Bed rest, fluids, easily swallowed foods, and salicylates also help give relief.

THE JOURNAL

of the

Medical Association of the State of Alabama

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Associate Editors

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Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent.

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DELEGATES AND ALTERNATES TO THE AMERICAN MEDICAL ASSOCIATION

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THE MONTH IN WASHINGTON

All too frequently overlooked in congressional activity on health and related bills each year are the little-publicized but highly important appropriations measures—without which no program of the federal government could move forward. The appropriations hearings in the House (where all money bills must originate) rarely get headlines since they are conducted behind closed doors. Weeks, and some times months, later the hearings are published, but by then the bill supplying money for an agency has been reported to the House.

It is only when the measure gets to the Senate that private groups and individuals are heard—by then in open sessions. Closed House sessions are not new. That is the way it has been done ever since Congress set up a separate committee on appropriations back in 1865.

The importance of appropriations in running the federal government was clearly illustrated when the President submitted to Congress his 1,272-page budget message in which he sought \$65.9 billion for all federal programs for the fiscal year beginning July 1.

While there was no overall total of projected spending by all the agencies in the health field, the budget requests for the Department of Health, Education, and Welfare showed a sharply upward trend. And if certain new legislation is voted on this session—like the projected 5-year program of construction grants for medical schools and private laboratory facilities—the total figure for subsequent years is likely to be even higher.

On the medical school-laboratory construction bill, the President asked Congress for \$40 million for the first year (estimated cost over five years is \$250 million). Construction grants, which would have to be matched on a 50-50 basis, would be available for private medical schools as well as non-federal laboratories conducting research into a wide range of crippling diseases.

The budget message also calls for another \$30 million in outright grants to the states to help them in financing poliomyelitis vaccination programs, the same amount appropriated by Congress last session. The administration in a separate request asked for extension of the polio law, from February 15, 1956 to June 30, 1957, and both the

House and Senate with only brief debate voted the 17-month extension. Since only half of last year's \$30 million was spent up to the February 15 expiration date of the original act, there was no rush for Congress to act on the new account.

Other new spending asked by the administration, contingent, of course, on enabling legislation, includes \$10 million for initial capitalization of mortgage loan guarantees for health facilities; \$5 million for graduate and practical nurse and professional health personnel training, \$3 million for water pollution grants; \$1.5 million for mental health expansion programs; and \$1 million for sickness and disability surveys in the U. S.

If Congress approves the requests, virtually all segments of the Department of HEW will have more money to spend than in this fiscal year. None would benefit more, however, than the medical research arm of government, the National Institutes of Health. The total sought for the seven institutes is 28% more than estimated spending this year. Here are some examples: National Cancer Institute, \$32,437,000, up 29%; National Heart Institute, \$22,106,000, up 17%, and the National Institute of Allergy and Infectious Diseases (formerly the National Microbiological Institute), \$9,799,000, a 26% increase.

The President requested \$130 million for the Hill-Burton hospital-clinic construction program which will be 10 years old this August. In this connection Congress has been asked to extend the act for two years beyond next year, and action is expected this session.

After a study of possibilities in the peaceful uses of atomic energy, a panel has recommended, among other things, that the U. S. encourage states and private organizations to take full advantages of the opportunities offered by radioactive material for medical research and treatment.

It now appears that an improved and more uniform program of medical care for service families will be adopted this session—possibly before this is published. One feature: A \$25 deductible charge in civilian hospitals, but with the government paying the full insurance premium, and a mandatory subsistence charge in military hospitals.

Making slower progress is the plan—

under consideration for more than a year—for a health insurance program for U. S. civilian workers. Here the government would pay about half the cost.

Several committees are urging stricter penalties and other changes to bring the illicit narcotic traffic under better control; so far there has been no suggestion of more controls over the medical profession in the handling of narcotics.

DETECTION OF UTERINE CANCER

Further studies of a new method for detecting uterine cancer, the second most deadly form of cancer in women, will be conducted in eight communities throughout the country, according to Leonard A. Scheele, Surgeon General of the Public Health Service, U. S. Department of Health, Education, and Welfare.

The technique, involving examination of cells which have been shed by the uterus, received its preliminary evaluation on a mass basis in studies conducted in Memphis, Tennessee, during the past two years.

"These additional pilot projects," said the Surgeon General, "represent positive steps toward the ultimate goal of totally eliminating this form of cancer which so frequently and tragically attacks women in their early years of maturity."

The cell examination test is a relatively simple diagnostic procedure. A physician or nurse can obtain a specimen of fluid from the vaginal vault both quickly and painlessly. The presence or absence of cancer cells in the specimen can be tentatively established through microscopic examination and, where cancer cells are found present, further study of biopsy is made to establish a firm diagnosis.

The Memphis study indicated that uterine cancer could be diagnosed in its early stages and if the tests were applied universally, it would probably be responsible for the almost total eradication of the disorder. In Memphis the test produced a case-finding rate forty times that observed in the community prior to establishment of the project. In the first seventy thousand women tested, 88.3 per cent of the early, highly curable cases of uterine cancer (cancer of the neck of the womb) discovered by this method had not been previously diagnosed nor suspected by the individual.

The project locations thus far chosen for

further evaluation of the test are: Louisville, Kentucky; Madison, Wisconsin; Detroit, Michigan; Charlotte, North Carolina; San Diego, California; Providence, Rhode Island; Columbus, Ohio; and Washington, D. C. These programs will be activated as soon as arrangements are completed with sponsoring or cooperating local health and medical agencies. Each project is expected to run for about three years. In some instances the National Cancer Institute will participate by staffing and equipping local clinics and laboratories; in others, funds will be made available through grants to support work which will be carried out entirely under local auspices.

This opportunity for rapid, full evaluation of the cell examination test was made possible by Congress' special allocation of \$500,000 for this purpose, included in the 1956 budget of the National Cancer Institute.

Details concerning the current status of each project are available on request.

PHYSICIAN NEEDED

The Regional Office of the Veterans Administration in Montgomery, Alabama, has a vacancy for the position of Rating Specialist, Medical, and is interested in securing applications from physicians located in Alabama.

According to Harley A. Smith, Regional Manager, the position is in the classified Federal Service at a salary of \$8,645.00 per annum. Duties of the position involve making medical determinations from records of physical examination and military service records, and, in some instances, from personal observation. The work would be entirely desk work in connection with adjudication of veterans' disability claims.

Mr. Smith stated that applicants should not be over 60 years of age and should be in good health. Any physician interested in securing detailed information concerning the position should write to the Personnel Officer, Veterans Administration Regional Office, 400 Lee Street, Montgomery, Alabama.

ASPIRIN IN ARTHRITIS

The medicine used by most patients to ease the inflammation and pain of rheumatoid arthritis, the nation's number one crippling disease, is aspirin, a medical survey revealed.

Results are reported in the journal *GP* (Vol. 12, p. 69, 1955), published by the American Academy of General Practice. Data were obtained by Dr. Walter M. Solomon of the Cleveland Clinic in a questionnaire sent in 1955 to members of the American Rheumatism Association.

Replies were received from 284 doctors treating more than 13,000 rheumatoid arthritis patients. Aspirin, the doctors stated, is used routinely by 80 per cent of their patients, while the hormone cortisone is given to 19 per cent. Gold is used in various forms in 28 per cent; hydrocortisone in 21 per cent; phenylbutazone in 13 per cent; and ACTH, various antispasmodics and vaccines in about three to four per cent.

Approximately 45 per cent of the physicians also prescribe some form of vitamin, according to Dr. Solomon. Many other drugs are administered to treat the disease, including crude liver injections and the two antimalarial drugs Aralen and Atabrine.

Transfusions are used in a very small number of patients. Few doctors, the poll revealed, restrict alcohol and tobacco.

Doctors Leave Bandages Off Surgical Wounds

—Further evidence of the safety and practicality of leaving clean chest and abdomen surgical wounds uncovered by dressings has been given by three Des Moines, Iowa, Veterans Administration hospital physicians.

They said in the Feb. 18 Journal of the American Medical Association that clean wounds without dressings appear to heal more rapidly and with less reaction than covered wounds.

In addition, the nondressing of such wounds is convenient, saves surgical dressings costs and the time of doctors and nurses, and eliminates the cumbersome dressings and irritation of adhesive tape, Drs. Louis T. Palumbo, Philip J. Monnig, and Dudley E. Wilkinson said.

The method was first recommended before 1920, but has not been used extensively, they said.

Beginning in June 1954, the doctors conducted a study of 211 consecutive cases with 222 clean surgical wounds of the abdomen and/or the chest. Of this group, 106 patients with 111 wounds were treated without surgical dressings and 105 patients with 111 wounds with dressings.

Those with dressings were cared for in the conventional manner, with the bandages being removed from nearly all six to eight days after surgery. In the other group, all but three had their dressings removed within 24 hours and the wound left uncovered. The remaining three had their dressings removed within 48 hours after surgery.

PROGRAM OF THE ANNUAL SESSION
OF THE
MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
BIRMINGHAM

APRIL 19, 20, 21, 1956

THOMAS JEFFERSON HOTEL

GENERAL INFORMATION

All sessions of the Association and exhibits will be at the Thomas Jefferson Hotel, convention headquarters.

The maximum time consumed by essayists should not exceed twenty minutes. This time limit, however, does not apply to invited guests. It is suggested that the salient features of papers be presented within this time, reserving the complete elaboration for publication in the Journal of the Association.

All papers read before the Association should be deposited with the Secretary when read; otherwise, their publication may be delayed.

Papers will be called in the order in which they appear on the program. Should the reader be absent when called, his paper will be passed, and called again when the program is concluded.

REGISTRATION

The registration desk will be on the lobby floor of the hotel. Be sure to register.

THE FIFTY YEAR CLUB

According to custom, physicians who graduated fifty years ago will be honored by the Association at this meeting. Their names appear in the program.

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PROGRAM**First Day, Thursday, April 19**

Terrace Ballroom

Thomas Jefferson Hotel

Morning Session

9:00 A. M.

Call to order by the President—

Frank L. Chenault, Decatur.

Invocation—

Dr. John N. Lukens, Pastor, Independent Presbyterian Church, Birmingham.

Addresses of Welcome—

*Hon. James W. Morgan, Mayor, City of Birmingham.**E. Byron Glenn, President, Jefferson County Medical Society.***PART I****REPORTS OF STANDING COMMITTEES**

1. Medical Service and Public Relations—
J. O. Finney, Chairman.
2. Maternal and Child Health—
Hughes Kennedy, Jr., Chairman.
3. Cancer Control—
John Day Peake, Chairman.
4. Postgraduate Study—
J. R. Garber, Chairman.
5. Mental Hygiene—
Jack Jarvis, Chairman.
6. Prevention of Blindness and Deafness—
Karl Benkwith, Chairman.
7. Tuberculosis—
Robert K. Oliver, Chairman.
8. Physician-Druggist Relationships—
A. J. Treherne, Chairman.
9. Anesthesiology—
Alfred Habecb, Chairman.
10. Industrial Medicine—
C. L. Yelton, Chairman.
11. UMWA Medical Care Program—
E. Bryce Robinson, Jr., Chairman.

12. Blue Cross-Blue Shield—
J. P. Collier, Chairman.
J. E. Moss, Co-Chairman.
13. Publishing Committee—
Douglas L. Cannon, Chairman.
14. Committee on Veterans' Affairs—
B. W. McNease, Chairman.

SPECIAL COMMITTEES

1. On Insurance—
J. O. Morgan, Chairman.
2. On the Coroner System—
J. A. Cunningham, Chairman.
3. American Medical Education Foundation—
H. G. Hodo, Jr., Chairman.

REPORTS OF OFFICERS

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Douglas L. Cannon, Montgomery.

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- (2) Southwestern Division
W. R. Carter, Repton.
- (3) Northeastern Division
Hugh Gray, Anniston.
- (4) Southeastern Division
S. W. Windham, Dothan.

The President's Message—

*Frank L. Chenault, Decatur.***PART II****SCIENTIFIC PROGRAM**

1. *Thoracic Emergencies in the Aged*—
DUANE CARR,
Memphis, Tenn.
2. *Behavior Problems in Adolescence*—
J. ROSWELL GALLAGHER,
Boston, Mass.
3. *Prepared Childbirth*—
C. LEE BUXTON,
Yale University,
New Haven, Conn.
4. *Convulsions in Children*—
KATHERINE DODD,
Little Rock, Ark.

**Afternoon Session****Thursday, April 19**

2:00 P. M.

1. *Female Urology in General Practice*—
MAURICE E. BARRETT,
Decatur, Alabama.
2. *Investigation of Unexplained Deaths in Alabama*—
J. A. CUNNINGHAM,
Birmingham, Alabama.
3. *A New Approach to the Autopsy Problem*—
E. M. CHENAULT,
Decatur, Alabama.
4. *Problems in the Care of the Newborn Infant*—
DAN W. BURKE,
Mobile, Alabama.

5. *Horseshoe Kidney and Ileus—A Case Report*—
S. D. DAVIS,
Talladega, Alabama.
6. *Ultrasonic Energy in Medicine*—
F. F. SCHWARTZ,
Birmingham, Alabama.
7. *Carcinoma of the Lung*—
O. W. CLAYTON,
Birmingham, Alabama.

Social Event

The members of the Association and their wives are invited to be the guests of Dr. C. N. Carraway at a barbecue at the Carraway Methodist Hospital at 5:30 P. M.



Second Day, Friday, April 20

Morning Session

Terrace Ballroom

9:00 A. M.

1. *Trends in Medical Education*—
ROBERT C. BERSON,
Birmingham, Alabama.
2. *Lesions of the Esophagus*—
JOS. O. REED,
Harper Hospital
Detroit, Mich.
3. *The Science Changes, but the Art Is Eternal*—
JAMES E. BRYAN,
Consultant, Medical Public Relations,
Summit, N. J.
4. The Jerome Cochran Lecture:
The Chronic Toxicity of Salt (Sodium Chloride)—
JOHN B. YOUNG, Dean,
Vanderbilt University Medical School,
Nashville, Tenn.
5. Recognition of the Fifty Year Club.
6. Announcement of Vacancies in the College of Counsellors.
7. Meeting of Counsellors and Delegates for the Purpose of Making Nominations to Fill Vacancies in the College of Counsellors.



Afternoon Session

Friday, April 20

2:00 P. M.

1. *Diagnosis Poison—Unsuspected Poisoning, a Diagnostic Pitfall*—
HENRY M. GEWIN,
Mobile, Alabama.
2. *The Changing Role of the General Practitioner of Medicine and Surgery as it Relates to the Treatment of Tuberculosis*—
ROBERT K. OLIVER,
Montgomery, Alabama.
3. *The Role of Pyrazinamide in the Chemotherapy of Chronic Pulmonary Tuberculosis. A Clinical Evaluation of 37 Cases Treated With Pyrazinamide in Combination With Other Drugs*—
ARTHUR A. CALIX and
KATHLEEN WHITE,
Decatur, Alabama.

4. *The Diagnosis and Treatment of Nutritive Failure Today*—
TOM D. SPIES,
Birmingham, Alabama.
5. *Prognosis in Congestive Heart Failure*—
JAMES T. GRIMES,
Enterprise, Alabama.
6. *Newer Concepts of Drug Therapy of Rheumatic Diseases*—
ROBERT S. HOGAN,
Birmingham, Alabama.
7. *Diet in Pregnancy*—
MICHAEL NEWTON,
Jackson, Miss.
8. *The Clinical Use of Reserpine*—
CLYDE BROOKS,
Tuscaloosa, Alabama.



Last Day, Saturday, April 21st

Terrace Ballroom

9:00 A. M.

Business Meeting of the Association sitting as the Board of Health of the State of Alabama:

- (1) Report of the Board of Censors;
- (2) Revision of the Rolls:
 - (a) County Societies,
 - (b) Counsellors,
 - (c) Correspondents;
- (3) Election and Installation of Officers.

Adjournment



PROGRAM OF THE WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Redmont Hotel

April 19-20, 1956

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American Medical Education Foundation—Mrs. W. J. Rosser, 2721 Hanover Circle, Birmingham.
Bulletin—Mrs. John M. Kimmey, Elba.
Civil Defense—Mrs. E. M. Chenault, Decatur.
Legislation—Mrs. E. J. Kocour, Montgomery.
Mental Health—Mrs. J. S. Tarwater, Tuscaloosa.
Nurse Recruitment—Mrs. L. M. Johnson, Elba.
Organization—Mrs. J. F. Holley, Florala.
Program—Mrs. Thomas L. Payne, Jr., Jasper.
Public Relations—Mrs. S. Joseph Campbell, Birmingham.
Today's Health—Mrs. Fred W. Smith, Huntsville.
- B. *Sponsored by Woman's Auxiliary, Southern Medical Association*
Counselor to Southern—Mrs. John M. Chenault, Decatur.
Doctor's Day—Mrs. William Noble, Ft. Payne.
Jane Todd Crawford—Mrs. J. U. Reaves, Mobile.
Research and Romance of Medicine—Mrs. Reginald Baker, Dora.
- C. *Sponsored by Woman's Auxiliary, Medical Association of the State of Alabama*
Archives and Exhibits—Mrs. J. O. Colley, Jr., Troy.
Lettie Daffin Perdue Scholarship—Mrs. B. B. Kimbrough, Mobile.
Members-at-Large—Mrs. E. F. Leatherwood, Hayneville.
Memorial—Mrs. J. O. Morgan, Gadsden.
Newsletter—Mrs. B. F. Austin, Montgomery.
Press and Publicity—Mrs. Alston Callahan, Birmingham.
Revisions—Mrs. J. U. Reaves, Mobile.
Rural Health—Mrs. E. V. Caldwell, Huntsville.
Yearbook—Mrs. Buford Word, Birmingham.
Nominating—Mrs. John M. Chenault, Decatur.
Essay Contest—Mrs. Kermit Pitt, Decatur.
Handbook—Mrs. John M. Chenault, Decatur, and Mrs. N. T. Davie, Anniston.
- D. *For Convention*
Convention Chairman—Mrs. Harold E. Simon, Birmingham.
Credentials and Registration—Mrs. S. Joseph Campbell and Mrs. Charles F. Lewis, Birmingham.
Reservations—Mrs. Arthur M. Freeman, Birmingham.
Flowers—Mrs. Kellie Joseph and Mrs. John E. Kent, Birmingham.
Hospitality—Mrs. Samuel K. Cohn, Mrs. Paul S. Woodall, Mrs. Herbert F. Gaines, Mrs. Buford Word, Mrs. John F. Jenkins, Jr., Mrs. Champ Lyons, Birmingham.
Transportation—Mrs. Josiah C. Carmichael, Birmingham.

Thursday, April 19

- 8:30-4:30—Registration.
- 9:00 A. M.—Preconvention Executive Board Meeting, Mrs. William G. Thuss, President, Presiding.
- 12:30 P. M.—Dutch Luncheon, Redmont Hotel, Mrs. William G. Thuss, Presiding.
Honoring Mrs. John J. O'Connell, President, Woman's Auxiliary to the Southern Medical Association, St. Louis, Mo.
Invocation.
Welcome—Mrs. Charles Kessler, Birmingham.
Greetings from the Medical Association of the State of Alabama—Dr. Frank Chenault, Decatur.
Address—Mrs. John J. O'Connell.
- 2:30 P. M.—First General Session.
Call to Order—Mrs. William G. Thuss, President, Birmingham.
Invocation.
Membership Pledge.
Introduction of Guests.
Convention Rules of Order—Mrs. Harold E. Simon, Birmingham.
First Report of Credentials Committee—Mrs. S. J. Campbell, Birmingham.
Report of Reading Committee—Mrs. Weldon Ray, Bessemer.
Message—Dr. Douglas L. Cannon, Secretary-Treasurer, Medical Association of the State of Alabama.
Annual Reports of Officers.
Annual Reports of Committee Chairmen.
Annual Reports of County Presidents:
 Southeastern District—Mrs. A. B. Lee, Opp.
 Coffee—Mrs. J. S. DuBois, Enterprise.
 Covington—Mrs. E. A. Ray, Andalusia.
 Houston—Mrs. Joe Garner, Dothan.
 Montgomery—Mrs. Hugh L. Praytor, Montgomery.
 Pike—Mrs. Jack Brantley, Troy.
 Northwestern District—Mrs. T. R. Wear, Tuscaloosa.
 Colbert—Mrs. James Caden, Sheffield.
 Cullman—Dr. Sylvia Morris, Cullman.
 Jefferson—Birmingham—Mrs. Charles Kessler.
 Jefferson—Bessemer—Mrs. F. H. Denson, Lipscomb.
 Lauderdale—Mrs. Milton Dunn, Florence.
 Marion—Mrs. J. O. Brooks, Hamilton.
 Morgan—Mrs. L. R. Murphree, Decatur.
 Tuscaloosa—Mrs. Otis Jordan, Tuscaloosa.
 Walker—Mrs. J. K. Taggart, Jr., Jasper.
- Achievement Awards.
Memorial Service—Mrs. J. O. Morgan, Gadsden.

**Friday, April 20**

- 8:30-12:30—Registration.
- 9:00 A. M.—Second General Session.
Call to Order—Mrs. William G. Thuss, President.
Invocation.
Introduction of Guests.
Second Report of Credentials Committee—Mrs. S. J. Campbell, Birmingham.

Minutes—Mrs. Weldon Ray, Recording Secretary, Bessemer.

Message—Mr. W. A. Dozier, Public Relations Director, Medical Association of the State of Alabama.

Annual Reports of County Presidents (continued):

Northeastern District—Mrs. William C. Friday, Sylacauga.

Calhoun—Mrs. Philip Fagan, Anniston.

DeKalb—Mrs. Wm. B. Hotalen, Ft. Payne.

Etowah—Mrs. Amos Gipson, Gadsden.

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Talladega—Mrs. John L. Thompson, Jr., Sylacauga.

Southwestern District—Mrs. W. Bruce Nelson, Bay Minette.

Baldwin—Mrs. Cecil Shaw, Loxley.

Dallas—Mrs. S. O. Moseley, Jr., Selma.

Escambia—Mrs. C. P. St. Amant, Atmore.

Mobile—Mrs. C. D. Terry, Spring Hill.

Recommendations from the Executive Board.

Presentation of Budget for 1956-57—Mrs. J. Sam Smith, Finance Officer, Montgomery.

New Business.

Announcements.

Report of Nominating Committee—Mrs. John M. Chenault, Chairman, Decatur.

Election of Officers.

Election of Nominating Committee.

Election of Delegates to National Convention.

Final Report of Credentials Committee—Mrs. S. J. Campbell, Birmingham.

Installation of Officers—Mrs. Mason Lawson, President Woman's Auxiliary to the American Medical Association, Little Rock, Ark.

Presentation of President's Pin and Gavel.

Presentation of Past-President's Pin.

Introduction of Committee Chairmen for 1956-57—Mrs. J. F. Holley, Florida.

Adjournment.

1:00 P. M.—Luncheon at Birmingham Country Club honoring Mrs. Mason Lawson, President, Woman's Auxiliary to the American Medical Association. Hosts—Jefferson County Medical Society.

Mrs. Charles Kessler, Presiding.

Invocation.

Introduction of Guests and New Officers.

Address—Mrs. Mason Lawson.

Fashion Show, presented by Kessler's, Birmingham.



CONVENTION RULES OF ORDER

1. All persons appearing on program shall be seated in a reserved section at front of room.

2. Members of the voting body shall wear badges at all sessions of the convention.

3. When addressing the chair, the member shall rise, give her name, and the name of her county Auxiliary.

4. Unless notified to the contrary, each speaker shall be limited to two minutes and may not speak more than twice on any one question.

5. A timekeeper will notify each speaker when her two minutes are up.

6. All motions shall be written, signed, and presented to the Recording Secretary.

7. Reports shall be read only by the person making the report or her appointed delegate.

8. Visitors are welcome at all sessions of the convention, but are requested to register and to sit apart from the voting body.



OTHER ITEMS

THE FIFTY YEAR CLUB

Class of 1956

(To whom Certificates of Distinction will be awarded on Friday morning at the conclusion of the Jerome Cochran Lecture.)

Herschel W. Bass	Gadsden
Walter H. Bell	Dozier
W. L. Box	Vernon
John T. Burch	Hartselle
Ellis G. Burson	Furman
Wilson T. Cantrell	Mentone
James O. Foster	Luverne
Thos. H. Gaillard	Magnolia
Paul E. Gwin	Jasper
Charles P. Hayes	Elba
Forest Lee Hester	Coatopa, RFD
Dorman M. Hicks	Cottonwood
Robert L. Hill	Winfield
Miles P. Hughes	Gadsden
W. L. Marshall	Langdale
Robert L. Meharg	Alexandria
H. R. Morris	Birmingham
George E. Nye	Scottsboro
George A. O'Connell	Anniston
Charles A. Olivet	Talladega
Naomi P. Underwood	Russellville
Reginald Van Iderstine	Daphne



VACANCIES IN THE COLLEGE OF COUNSELLORS

Vacancies that will present in the College of Counsellors at this meeting of the Association are as follows and for the reasons set forth:

1st Congressional District—3. The second terms of seven years of W. J. Barber and G. O. Segrest have expired. J. H. Baumhauer's first term of seven years has expired.

2nd Congressional District—3. E. F. Leatherwood has resigned because of ill health. C. G. Godard's second term of seven years has expired. J. M. Barnes' first term of seven years has expired.

3rd Congressional District—1. E. T. Brunson is to be elevated to Life Counsellor.

6th Congressional District—2. R. C. Hill is to be elevated to Life Counsellor. W. P. Baston has resigned.

9th Congressional District—6. J. A. Meadows has resigned. The second terms of seven years of C. N. Carraway, H. Earle Conwell, John W. Simpson and Frank C. Wilson have expired. The first term of seven years of S. Sellers Underwood has expired.

OTHER EVENTS**Alabama Association of Obstetricians and
Gynecologists****April 18, 1956**

Tutwiler Hotel, Birmingham

- 9:00 A. M. Business Meeting.
- 9:30 A. M. The Mechanism of Vascular Collapse in Eclampsia, by Dr. Henry B. Turner, Memphis, Tennessee.
- 10:30 A. M. Emotional Factors in Labor, by Dr. Michael Newton, Jackson, Mississippi.
- 11:30 A. M. The Investigation and Treatment of Problems of Ovulation in Infertility, by Dr. C. Lee Buxton, New Haven, Connecticut.

Luncheon

- 2:00 P. M. The Diagnosis and Treatment of the Syndrome of the Polycystic Ovary, by Dr. C. Lee Buxton.
- 3:00 P. M. Indications for Cesarean Section, by Dr. Michael Newton.
- 4:00 P. M. A Review of the Memphis Cancer Detection Program, by Dr. Henry B. Turner.

Banquet and Entertainment

**Alabama Pediatric Society**

The Alabama Pediatric Society will have its annual meeting in Birmingham at the Mountain Brook Country Club on Wednesday, April 18, 1956, the day prior to the meeting of the State Medical Association. Registration will start at 8:30 A. M. with the welcome hour from 9 o'clock to 10 o'clock. The guest speakers will be Dr. J. Roswell Gallagher, Chief of Adolescence Unit, Children's Medical Center, Boston, Mass., and Dr. Katherine Dodd, Professor of Pediatrics at the University of Arkansas Medical School.

**Alabama Orthopaedic Society****April 18, 1956**

Luncheon: 1 P. M. at the Crippled Children's Clinic & Hospital, Birmingham, followed by the program:

1. Guest Speaker: Dr. Irvin Cahen, Clinical Associate Professor, Orthopaedic Surgery, Louisiana State University.

Subject: Chondromalacia of the Patella (Illustrated).

2. Dr. Mario Accino.

Subject: The Effects Upon Leg Inequality by Arrest and/or Stimulation of The Epiphysis about the Knee.

3. Round Table Discussion of Interesting Case Presentations by the Society's Members.

Social Hour and Banquet for Members and their Wives, Mountain Brook Country Club, 6 P. M., April 18th, 1956.

**International College of Surgeons**

There will be a breakfast meeting of the International College of Surgeons at 7:30 A. M. on April 20 at the Thomas Jefferson Hotel.

Alabama Academy of General Practice

The Board of Directors of the Academy will meet at 6:30 P. M. on April 18.

**Alabama Radiological Society**

A luncheon meeting of the Society will be held at the Thomas Jefferson Hotel on Friday, April 20. A business session will be conducted, and officers elected for the ensuing year.

**Alabama Chapter****American College of Chest Physicians**

The Third Annual Meeting of the Alabama Chapter of the American College of Chest Physicians will be held on April 18, 1956 at the Thomas Jefferson Hotel, Birmingham, Alabama.

Afternoon Program, 2:00 p. m.:

Congenital Cysts and Tumors of the Mediastinum: Radiological Aspects—

Dr. Edgar Little, New Orleans, Louisiana.

Congenital Cysts and Tumors of the Mediastinum: Surgical Aspects—

Dr. Duane Carr, Memphis, Tennessee.

Early Diagnosis of Bronchogenic Carcinoma—

Dr. Hollis Johnson, Nashville, Tennessee.

Pulmonary Emphysema and Cor Pulmonale: Physiological Treatment—

Dr. Ben. Branscomb, Birmingham, Alabama.

Business Session: Election of Officers

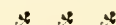
Evening Program, 8:00 p. m.:

Address: Subject to be announced—

Dr. Duane Carr, Memphis, Tennessee.

X-Ray Conference: Moderator, Dr. Duane Carr, Memphis, Tennessee. Members and guests are encouraged to bring interesting or unusual chest x-ray films for interpretation and discussion at the X-Ray Conference.

There will be a dinner at the Thomas Jefferson Hotel, Birmingham, at 6:30 p. m. Reservations for members of the Chapter and guests can be made prior to the meeting or at the time of registration for the afternoon session by contacting Dr. Kellie Joseph, Secretary-Treasurer, Woodward Building, Birmingham, Alabama.

**TECHNICAL EXHIBITS**

Concerns Exhibiting at the Meeting of The Medical Association of the State of Alabama, Birmingham, Alabama, April 19-21, 1956

1. Durr Surgical Supply Company, Birmingham, Alabama.
2. McKesson & Robbins, Inc., Birmingham, Alabama.
3. The S. E. Massengill Company, Bristol, Tennessee.
4. J. A. Majors & Company, Dallas, Texas.
5. Eli Lilly & Company, Indianapolis, Indiana.
6. Eaton Laboratories, Norwich, New York.
7. Carnation Company, Los Angeles, California.

8. Abbott Laboratories,
Chicago, Illinois.
9. Mead Johnson & Company,
Evansville, Indiana.
10. Hoffman La Roche Inc.,
Nutley, New Jersey.
11. Whorton Pharmacal Company,
Gadsden, Alabama.
12. Lederle Laboratories,
Pearl River, New York.
13. Van Antwerp Surgical Supply Co., Inc.,
Mobile, Alabama.
14. Pfizer Laboratories,
Brooklyn, New York.
15. Doho Chemical Corporation,
New York, New York.
16. Tablerock Laboratories,
Greenville, South Carolina.
17. Pet Milk Company,
St. Louis, Missouri.
18. A. H. Robins, Co., Inc.,
Richmond, Virginia.
19. Wm. S. Merrill Company,
Cincinnati, Ohio.
20. Ciba Pharmaceutical Products, Inc.,
Summit, New Jersey.
21. Federal Financial Recovery Service,
Sheffield, Alabama.
22. Parke, Davis & Company,
Detroit, Michigan.
23. Maltbie Laboratory Division,
Belleville, New Jersey.
24. Testegar & Company, Inc.,
Detroit, Michigan.
25. C. B. Fleet,
Lynchburg, Virginia.
26. Disitin Chemical Company,
Providence, Rhode Island.
27. G. D. Searle & Company,
Skokie, Illinois.
28. Schering Corporation,
Bloomfield, New Jersey.
29. Endo Products,
Richmond Hill, New York.
30. Stuart Company,
Chicago, Illinois.
31. National Drug Company,
Philadelphia, Pennsylvania.
32. Geigy Pharmaceuticals,
New York City, New York.
33. Zeimer Manufacturing Company,
Warsaw, Indiana.
34. Picker X-Ray Corporation,
Birmingham, Alabama.
35. A. S. Aloe Company,
St. Louis, Missouri.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

ANOTHER WAY TO PUT IT

W. A. Dozier, Jr.

Director of Public Relations

The Southern States Industrial Council *Bulletin* of January 15, 1956 carried an article entitled "Hooked." The author is unknown, but he said,

"Talk to the heads of the larger industries in this country today, and what do you find? Almost invariably they are strong for free enterprise. They are opposed to the encroachments of the socialistic state. They know the dangers that lie in big government, and in a looming labor monopoly.

"But try and get these tycoons to do anything about it! Suggest any kind of political action or economic action to counter the socialistic trend—and watch them back away like sheep from a sulphur spring.

"Why is this? Why do these big, able Americans, who perceive clearly what is happening to the country and to their enter-

prises, shy away from any action to hold the fort?

"Because they are already hooked.

"In the first place, the New Deal threw the fear of big government into them; fear of pressure, investigations, labor trouble, credit squeeze, tax reprisals, etc. and got away with it.

"In the second place, every big industry today is drawing from 15 to 40% of its business in defense or government contracts, direct or indirect. Their bread is already buttered largely by Washington.

"They are hooked good and tight. We doubt that the heads of big basic industries are going to save the country for free enterprise or free anything. Fortunately, this doesn't apply to the numerous patriots at somewhat lower levels of industry, many of whom do not fear Washington, politicians, or the devil himself. These men can be counted on. We know quite a number of

such men who spend their energies and money freely to fight socialism wherever it shows its head.

"But the really biggest fish are not to be counted on for anything except to swim with the tide. These latter are already on the government line and can't get away."

If this author be correct in his statements

that certain big business leaders are already hooked or even if he has only pointed up pressures that can be brought to bear, it seems wise for the medical profession to take a look at and to measure government proposals in the field of health by a yardstick that includes such for you. Thus far, you are free enterprise too.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION

D. G. Gill, M. D.

State Health Officer

THE STATE DEPARTMENT OF HEALTH IN ACTION

Contributed by

Nadine Pitts, Director

Division of Public Health Education

In our daily communication with one another we frequently use comparisons to explain or picture actions, objects and ideas. A classic example of this usage is the universal practice of explaining the growth process to young children by comparing their development with that of lower animals in some respects.

In the same way, although you may never have thought so, public health can be compared with a house or a policeman or police department. To compare public health to a house is not to say that they "look" alike. Rather, they are similar in that they are two of the methods man employs for essentially the same over-all purpose. They both are ways in which we adapt our environment to ourselves, as much as this is possible. The house is a shelter from environmental weather conditions; it may be adapted further by heating in winter and cooling in summer. Similarly, public health activities may take the form of destruction of mosquitoes' breeding places to reduce their numbers, and in turn, their power to transmit disease. Or activities may consist of inoculation against a particular disease, so that an individual's natural ability to form antibodies is set in motion.

Public health in Alabama and elsewhere, then, is a part of the whole process of social betterment. The author of *An Introduction to Public Health* (Harry S. Mustard, Mac-

millan Co., 1935) tells us that health work is but one of many measures or manifestations of man's conscious effort to overcome a particular group of hazards or hardships. And the vital importance of maintaining and protecting health is easy enough to understand when one considers it is an essential ingredient in human welfare.

With this over-all view of public health in mind, let us examine the efforts made in Alabama to overcome hazards to life and well-being. The consideration of all such efforts perhaps would be an insurmountable task. For public health is not one but many things. A comprehensive survey would include all phases of preventive medicine today. Moreover, the work of numerous official agencies, as well as voluntary groups and even some individuals, would need to be cataloged.

However, Alabama's official agencies might well be considered the fountainhead or the principal source of public health activities in the state. These official agencies are the State Department of Health and the 67 county health departments. So it is with some of the activities of one of these, the State Department of Health, to deal with hazards to life and well-being that we will examine here. Of course, efforts at the state level will necessarily reflect, in many cases, similar ones by county health departments.

The Department's Bureau of Vital Statistics carried on extremely important work during the year 1954, just as in earlier ones. The records it keeps are the ones which tell Alabama health officials what is happening to the population. The Bureau's records for 1954, for example, included 81,827 certificates filed for live births. In the same year, 25,982 deaths, 1,882 fetal deaths or still-

births, and 19,557 marriages were recorded. The story these figures tell is one of a relatively high birth rate, a rate that is above the national average. Moreover, the state's death rate is generally low.

Still a closer look at the vital statistics for that year reveals that 19 deaths from measles, 11 from whooping cough, and 12 from diphtheria occurred. Moreover, 52 fewer tuberculosis deaths occurred in that period than during the year before, although that disease remained in the top 10 leading single causes of death among Alabamians. Cancer, accidents and pneumonia ranked third, fourth and fifth, respectively, on that list.

It is such pictures drawn by figures that point the way to the state's present and future health work needs. In the case of diphtheria, where a specific agent is available for protective immunization, additional public health education may be called for. Such education would stress the desirability of receiving this easily obtainable protection, either from the person's family doctor, or from the local health department. Where accidents are concerned, no specific preventive agent is available, of course. However, attention can frequently be called to those potential hazards which promote accidents—the toy left blocking the pathway which may result in a dangerous fall, or the ill-placed lighted candles on a Christmas tree which may ignite nearby paper decorations and in turn destroy a house, or impair a victim's health when major burns are sustained. Similarly, cancer deaths may be prevented by stressing the importance of heeding early warning signals; the individual may thereby be motivated to seek medical care early when the chances for cure are greater.

The Department's Division of Hospital Planning has responsibility for assuring an adequate hospital and related facilities system for Alabama. This does not mean, of course, that the Division itself is in the actual business of construction. Rather, as its name implies, the staff is concerned with planning—with surveying existing facilities and with determining present and future needs.

Also, the Division of Hospital Planning has still another major function—that of licensing hospitals and other facilities such as nursing homes. To receive an operating license, a hospital or other facility must

meet certain standards set up by the State Department of Health. Thus, Alabamians are assured that their hospitals are adequate to supply the service they are designed to give. During 1954, a total of 181 general hospital beds was added to Alabama's public, nonprofit and private hospitals. Also, two public health centers and one public health laboratory were completed, and 237 licenses were issued.

The Department's Division of Mental Hygiene directs its efforts toward a greater understanding of mental illness. Also, the Division's staff offers consultant service to community mental health clinics. During 1954, 1,300 individuals received diagnostic, treatment and guidance help from the six clinics then in operation. For educational purposes, the Division circulated numerous films on mental health subjects, and published a monthly bulletin. Films were also circulated by another Department unit, the Division of Public Health Education, and newspaper releases and radio talks were other means used to acquaint individuals with various public health matters.

The Division of Machine Tabulation and the Division of Finance, two of the Department's service units, perform work which enables other sections to carry out their projects more efficiently.

The Bureau of County Health Work is an important link with local health units. Through its Division of Public Health Nursing, the Bureau provides consultation for nurses who work with county health departments. Through group conferences or through visits with individual nurses, consultants endeavor to help county workers with their special problems. Another Bureau section, the Merit System For County Health Work, has the job of supplying the public health personnel needs of county health departments.

As its name implies, the Bureau of Maternal and Child Health is concerned with efforts to improve health conditions for mothers and children. During 1954, in a continuing effort to reduce maternal mortality rates, a total of 3,191 maternity clinics was conducted in 50 counties in the state, with 54,238 patients admitted. Also, 619 well-baby clinic sessions were held in 21 counties, with 11,198 patients admitted. Child health activities included 419 dental clinics held in 30 counties, and nutrition

demonstrations at various clinics and conferences.

The Department's Bureau of Laboratories examined 527,134 specimens during the year 1954. Staffs of the central unit in Montgomery and eight branch sections in other towns conduct the often time-consuming procedures to establish the presence or absence of disease or pollution. Some of the types of specimens received for examination are samples of dairy products and water supplies, tuberculosis, diphtheria, intestinal parasites, such as hookworm, blood tests for venereal diseases, and animal brains for rabies tests. Also, the central laboratory continued its manufacture of such biologic products as typhoid and rabies vaccine for distribution to county health departments and doctors in private practice.

Charged with initiating control measures for certain diseases is the Department's Bureau of Preventable Diseases. Such measures may take the form of public health education, especially for such illnesses as typhoid fever and diphtheria—education designed to point out the effectiveness of the immunizing agents for these diseases. For tuberculosis, other lung and heart disease, the Bureau conducts a mass x-ray survey program. During 1954, mobile units were carried to five counties, where 57,723 individuals were x-rayed. An additional 43,741 persons were x-rayed in the Department's diagnostic clinics, and 749 of them were found to have tuberculosis.

Also in 1954, the Bureau held spot blood test surveys for syphilis in 15 counties, with 13,913 persons tested. Undoubtedly, such surveys as these explain why the Bureau's case reporting records show an encouraging drop in the number of reported cases of this disease in recent years.

For indigent cancer patients the State Department of Health maintains six cancer clinics. During 1954, 600 such patients were treated in these clinics as part of the Department's cancer control efforts.

As many writers have pointed out, the urgent need for an organized sanitary program was the reason for the establishment of the first health departments. The sanitation aspects of public health are perhaps even more important today than in earlier years. The State Health Department's Bureau of Sanitation performs a host of important jobs. Theirs is the task of super-

vising public water supplies. This supervision includes field inspections of each system's facilities, as well as interpretation of reports of bacteriologic examination of water samples and review and approval of plans for water works construction. Still other functions of the Sanitation Bureau are the training and provision of consultation for county sanitation officers and workers, inspection of environmental conditions in industrial plants, advisory and regulatory duties concerning the control of rats, mosquitoes and other vectors of public health importance, and the inspection and enforcement of regulations governing the operation of approximately 18,938 establishments. These plants include such businesses as pasteurization plants, dairies, bakeries and hotels.

These are, necessarily, only a few of the efforts of the State Department of Health during 1954. But perhaps the examples given are enough to show the direction of Alabama's official health agencies. Moreover, perhaps they also make clear the necessity for continuous vigilance to maintain the present state of health we may frequently be tempted to take for granted.

Parent-Child Conflicts Cause Breath-Holding
—Frequent severe spells of breath-holding by a small child are a sign of "profound insecurity" often resulting from conflict with his parents, according to two pediatricians.

Drs. Alanson Hinman, Winston-Salem, N. C., and Lloyd B. Dickey, San Francisco, said in the January American Journal of Diseases of Children, published by the American Medical Association, that breath-holding is an early form of temper tantrum—a primitive expression of anger or frustration.

A child may become frustrated because he is unable to cope with the world or because he feels insecure with his parents. In his helplessness, having no means of adequate expression, he reacts with rage "so overwhelming" that he loses control over himself and goes into a spell, they said.

Treatment must be directed toward a solution of the family conflict and helping the parents understand the emotional basis of the spells, the physicians said. The older methods—plunging the child into cold water or ignoring him during a spell or pointing out to him that similar behavior will be met with "harsh, if not painful, measures"—certainly should be avoided, they said.

The little child's only way of protesting against a frustrating world is by crying and throwing himself around. Anything approaching the same kind of behavior on the part of adults will aggravate the situation, they said.

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HISTOPLASMOSIS RESEMBLING PULMONARY MALIGNANCY

TREATMENT BY PULMONARY RESECTION

CASE REPORT

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Bessemer, Alabama

and

CHARLES R. KESSLER, M. D., F. A. C. S.

Birmingham, Alabama

Histoplasmosis is an infectious disease caused by the fungus *Histoplasma capsulatum*. The clinical manifestations may be protean and the disease may be generalized, involving more or less all of the body tissues or apparently localized to one organ system or even one particular organ. The organs most commonly involved are the lymph nodes, liver, lungs, spleen, adrenal glands, bone marrow, kidneys, intestinal tract, oral pharynx, larynx and skin. In more than one half of the cases proven by cultural or histologic methods, there has been definite evidence of involvement of the lung, either alone or in association with other organ involvement.¹ Hodgson, Weed and Clagett² reported 138 cases in which the lungs were involved in 65, either chiefly or solely.

Schwartz³ in his recent excellent review has proposed the following classification of pulmonary histoplasmosis: 1) Benign primary infection form resembling a primary tuberculous infection. 2) Chronic reinfection form resembling reinfection tubercu-

losis. 3) Mediastinal form resembling mediastinal lymphomata. 4) Diffuse interstitial pneumonic form resembling viral pneumonia or miliary tuberculosis. All of these various forms may appear in the active or inactive stages at the time the patient is seen. Apparently, in most infected individuals, the original infection is unrecognized as such and in these cases the disease acts very much like primary pulmonary tuberculosis. In mild and intermediate infections there may be malaise, fever, cough, gastro-intestinal upsets, etc. X-ray of the chest in such cases may show an infiltrate similar to bronchopneumonia or atypical pneumonia of the viral type. In the more severe cases, there is extreme prostration, anemia, hepatosplenomegaly and pneumonia, with occasional progression to a fatal outcome. It is now known that the fatal form of histoplasmosis, formerly considered to be the most common or only form, is the least common.⁴ Treatment in the acute stages has been unsatisfactory. However, Christie et al.⁵ have reported encouraging results using ethyl vanillate.

Histoplasmosis has been confused clini-

From the Departments of Medicine and Surgery, University of Alabama Medical Center and the Birmingham Baptist Hospital.

1. Parsons, R. J., and Zarafonitis, J. D.: Histoplasmosis in Man, *Arch. Int. Med.* 75: 1, 1945.

2. Hodgson, C. H.; Weed, L. A., and Clagett, O. T.: Pulmonary Histoplasmosis, *J. A. M. A.* 145: 807, 1951.

3. Schwartz, Benjamin: Histoplasmosis of Lungs, *A. M. A. Arch. Int. Med.* 94: 970, December 1954.

4. Beaderkopf, W. G., and Loosli, C. G.: Histoplasmosis, Tuberculosis and Coccidioidomycosis, *J. A. M. A.* 146: 621, 1951.

5. Christie, A. L.; Middleton, J. G.; Peterson, J. C., and McVickers, D. L.: Histoplasmosis Treated with Ethyl Vanillate, *Pediatrics* 7: 7, 1951.

cally with sarcoidosis.⁶ Monroe and Kurung⁷ reported a case in which the presumptive diagnosis was tuberculosis and whose clinical course was consistent with tuberculosis. However, after repeated studies for acid fast bacilli were negative, a search for pathogenic fungi revealed the presence of *Histoplasma capsulatum*. The present case report is of interest in that a presumptive diagnosis was pulmonary malignancy on the basis of a positive Papanicolaou smear from a reliable and competent pathologist. The symptoms of our case fit very well those described by Hodgson, Clagett⁸ and others in that the patient had cough, dyspnea, pain in the chest, expectoration and x-ray findings of peribronchial infiltration. The histoplasmin skin test is of value in the diagnosis. However, it may be negative during the height of the disease. This test is of greatest value in detecting chronic or recovered cases. In our patient, the histoplasmin skin test was negative on two occasions.

CASE REPORT

The patient was a 46 year old colored female who had been employed as a practical nurse. She was first seen at home on December 17, 1952 at which time she complained of cough and fever up to 104° for the previous three or four days. She gave a history of recurring cough and fever over a period of two years. These episodes were accompanied by wheezing sensations which she localized to the upper portion of the left lung. On December 18, 1952 she was admitted to the Bessemer, Alabama, General Hospital for study and treatment. The admission temperature was 102 degrees. She was noted to be obese, appeared to be acutely ill, moderately dyspneic and coughed constantly. There were a few subcrepitant inspiratory and expiratory rales over the left upper lobe of the lung but the balance

of the examination was negative.

Laboratory work on admission showed a red blood count of 4.4 million, white cell count of 10,700, with a differential of 73% polymorphonuclears, 22 lymphocytes and 5 monocytes. Urinalysis was negative except for a trace of albumin. X-ray of the



Fig. 1

chest was reported as showing a fairly marked pneumonia involving the left upper lobe of the lung (Fig. 1). Numerous examinations of the sputa were negative for acid fast bacilli and for tumor cells.

The patient was placed on penicillin, 400,000 units twice daily, and an expectorant cough mixture. On this she made rapid clinical improvement and the temperature reached normal by December 22, 1952. However, the pneumonic process in the left upper lobe showed little change despite the clinical improvement (Fig. 2). In view of

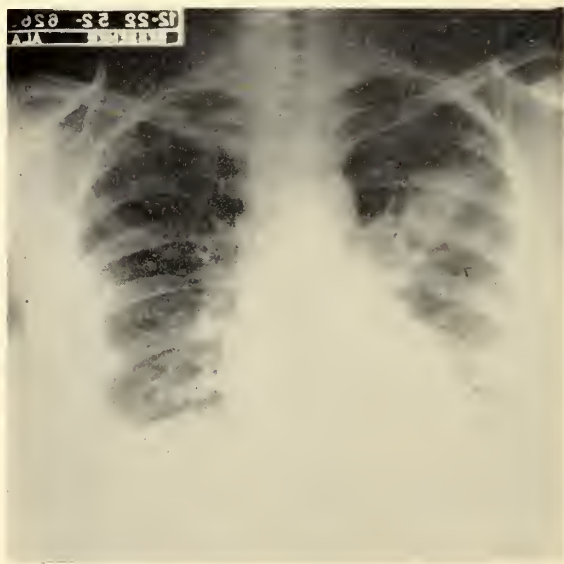


Fig. 2

6. Pinkerton, Henry, and Iverson, Lolle: Histoplasmosis. Three Fatal Cases with Disseminated Sarcoid-Like Lesions, *Arch. Int. Med.* 90: 456, 1952.

7. Monroe, James, and Kurung, J. M.: Histoplasmosis, with Review of the Literature and Report of a Case, Proved by Culture, with Involvement of the Upper Lobe of Each Lung Simulating Active Bilateral Apical Pulmonary Tuberculosis, *Ann. Int. Med.* 38: 206, 1953.

8. Forshee, James H., and Puckett, Thomas F.: Surgical Consideration in Localized Pulmonary Histoplasmosis. Presented at the 33rd Annual Meeting of the American Association for Thoracic Surgery at San Francisco, March 27-30, 1953.

the history of wheezing, it was thought that the patient should be bronchoscoped and she was accordingly transferred to the Birmingham Baptist Hospital for further study.

Additional laboratory studies were as follows: The sedimentation rate was 30 mm. per hour (Wintrobe method), sickle cell preparation was negative, and the blood count was essentially the same as previously reported except for a drop of the total white count to 8,500. Tuberculin test was done using old tuberculin (1:1000) and was negative. Histoplasmosis was not suspected at this time and consequently the histoplasmin skin test was not done until later.

Repeat x-rays of the chest on January 2, 1953 and January 8, 1953 showed a stranded infiltration in the left upper lobe extending from the hilum into the periphery, with thickening of the hilum. When compared with the previous films, there was consid-

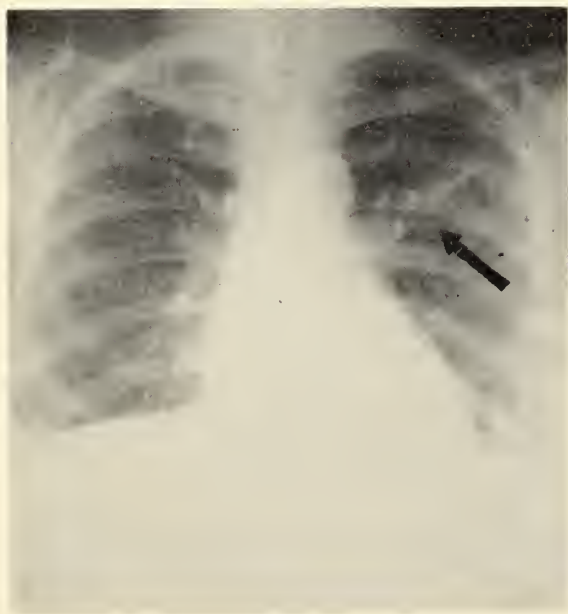


Fig. 3

erable but incomplete resolution in the left upper lobe with some contraction and decrease in the size of the thickened and enlarged left hilum (Fig. 3).

Bronchoscopy was performed on December 29, 1952 with the following findings: The larynx and vocal cords, the main carina and bronchi on the right were normal throughout. On the left side there was purulent sputum present in the main bronchus, with reddening and thickening of the bronchial mucosa generally. No tumor, ulceration or stenosis was noted. Bronchial washings obtained at the time of bronchos-

copy were reported to show "abnormal cells, several of which are typical of carcinoma."

On the basis of the finding of cancer cells in the bronchial washings, the history of recurring pneumonitis with localized wheeze and failure of resolution, it was thought that exploratory thoracotomy should be done. At operation on January 8, 1953 there was an area of induration extending from the hilum toward the periphery in the apical posterior segment of the left upper lobe. There was a very large soft lymph node at the hilum. It was doubtful from palpation and inspection of the lung that the patient had a neoplasm. However, the preoperative report of definite tumor cells could not be ignored and a left upper lobe lobectomy was performed without difficulty.

In the surgical specimen there was no evidence of carcinoma or tuberculosis. There was, however, a definite tuberculoid reaction which the pathologist, on initial inspection, felt resembled histoplasmosis. On this basis, a histoplasmin skin test was done (1 to 100) but was negative. A supplemental pathological report was made following further study. This showed, within the cytoplasm of several monocytes, gram-positive organisms, somewhat coccoid in shape with small capsules or pseudocapsules resembling *Histoplasma capsulatum*.

The patient has made an uneventful convalescence and has returned to full time duty as a practical nurse. There has been no further clinical or radiographic evidence of the disease. The histoplasmin skin test was still negative two years later.

COMMENT

According to the classification of Schwartz, this case could be classified under the diffuse interstitial pneumonic form of histoplasmosis. However, the history of recurring attacks of pneumonia with localized wheeze suggests that the involvement may have been primarily bronchial with a secondary obstructive pneumonitis of the bacterial type. The prompt clinical response of the patient to penicillin is further evidence along these lines.

It seems that surgical therapy of histoplasmosis will have some importance in spite of the fact that Hodgson, Clagett et al.² found only three indications for surgery out of 65 cases. Col. James H. Forshee⁸ of

the Fitzsimmons Hospital recently reviewed a series of 28 patients in which focal histoplasmosis was surgically resected. Apparently in his cases the lesions were circumscribed lesions which could not be differentiated from tuberculoma or pulmonary neoplasms.

SUMMARY

- 1. Histoplasmosis may mimic various pulmonary conditions such as tuberculosis and sarcoidosis. A case of histoplasmosis is reported in which carcinoma of the lung was suspected from the clinical history, radiographic and pathologic findings.
- 2. No further evidence of the lesion has been noted following pulmonary resection.

DEATHS FROM ECTOPIC PREGNANCY IN ALABAMA

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During the year 1954, of the 103 maternal deaths in the state of Alabama, eight were due to extra-uterine pregnancy.¹

Ectopic pregnancy as a cause of maternal death in 1954 was exceeded only by hemorrhage, toxemia and septic abortion. It has been suggested that the ratio of ectopic pregnancy to live births has increased since the advent of penicillin and other antibacterial drugs. Fallopian tubes which formerly were sealed off by gonorrheal salpingitis now, if the patient is treated with penicillin in the acute stage of the infection, are only partially occluded but scarred. A scarred fallopian tube is thought to be more susceptible to implantation of a fertilized ovum than a normal one, but this remains unproved. It is a fact, however, as shown by Fontanilla and Anderson's² statistics covering a ten-year period in Baltimore, Maryland, that the incidence of ectopic pregnancy is 50 per cent higher in the colored race. The only explanation for this in-

creased incidence is the more frequent occurrence of pelvic inflammatory disease in this race.

In general, the occurrence of ectopic pregnancy fluctuates with the live birth rate of the area. There is a direct proportion of ectopic pregnancy to the number of live births. The live birth rate is the only true yardstick for determining the exposure of the female genital tract to impregnation and the more the female genital tract is exposed to pregnancy, the more often an extra-uterine pregnancy will occur.

ALABAMA COMPARED WITH THE UNITED STATES

The death rate from ectopic pregnancy per 100,000 live births during a ten-year period, 1945 to 1954, in the state of Alabama, is compared with the death rate in the United States during the same period of time in Table II. As shown, there were eight deaths due to ectopic pregnancy in Alabama in 1945 and a like number in 1954. Although the number of deaths from ectopic pregnancy in 1945 and 1954 were the same, total live births increased from 70,321 in 1945 to 81,827 in 1954, resulting in a decrease of 14 per cent in the ectopic death rate per 100,000 live births during this ten-year period.

In the United States, there were 334 deaths in 1945 and only 162 in 1954. Taking into consideration the increase in live births in the United States from 2,735,456 in 1945 to 4,021,000 in 1954, this represents a decrease in maternal deaths from ectopic pregnancy during the same ten year period of 67.2 per cent.

To say it another way, from 1945 to 1954 there were, in Alabama, 86 deaths due to ectopic pregnancy and 819,420 live births. In the entire United States during the same

TABLE I
LEADING CAUSES OF THE 103 MATERNAL DEATHS
IN ALABAMA DURING THE YEAR 1954.

Hemorrhage	31
Toxemia	12
Septic abortion	11
Ectopic pregnancy	8
Pulmonary embolism	6
Cesarean section	5
Infection	3
Spinal anesthesia	3
Ruptured uterus	3

From the Department of Obstetrics and Gynecology, the Medical College of Alabama.

1. Report of the Committee on Maternal and Child Health, J. M. A. Alabama 24: 284-285, May 1955.

2. Fontanilla, Jose', and Anderson, George W.: Further Studies in the Racial Incidence and Mortality of Ectopic Pregnancy, Am. J. Obst. & Gynec. 70: 312-319, 1955.

period of time there were 2,277 deaths due to ectopic pregnancy and 35,900,690 live births. In Alabama, the ratio was one ectopic death to every 9,528 live births and in the United States, one ectopic death to every 15,766 live births.

In summary, two facts are apparent. First, the death rate from ectopic pregnancy during this ten-year period was reduced 67.2 per cent in the United States and only 14 per cent in Alabama. Secondly, one ectopic death to every 9,528 live births in Alabama to one ectopic death to every 15,766 live births in the United States shows that deaths from ectopic pregnancy in Alabama during the same ten-year period was 65.5 per cent greater than the death rate from ectopic pregnancy for this country as a whole.

In a similar ten-year period there were 391 patients with a proved diagnosis of extra-uterine pregnancy treated at University and St. Vincent's Hospitals, Birmingham. Nine of the 391 patients harbored pregnancies

less than one per cent which compares favorably with the current mortality for ectopic pregnancy in the United States as a whole.

Although a death rate of less than one per cent is good, it is far less favorable when compared with the series reported by Hutchinson and Crawford³ and Leff,¹ who cited 300 and 266 consecutive patients treated for ectopic pregnancy in their respective hospitals without a single death. All four of the maternal deaths in the University and St. Vincent's Hospital series were preventable. In none of these patients was ec-

Comparison of Deaths Due to Ectopic Pregnancy in Alabama and the United States.

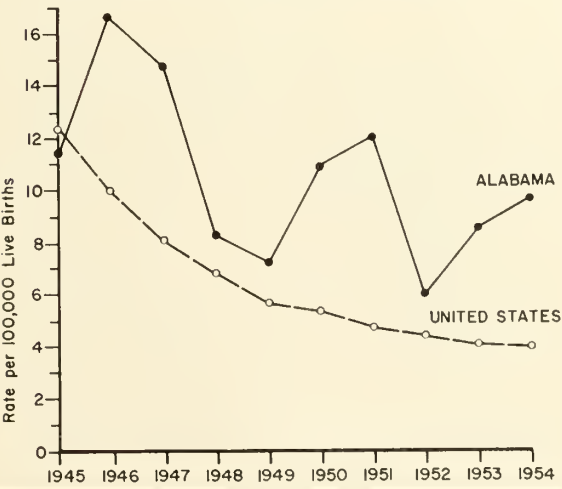


Fig. 1.

which had grown surreptitiously outside of the uterus to a state of fetal viability and were classified as cases of abdominal pregnancy. The other 382 patients were operated upon prior to the stage of fetal viability and were, for the most part, cases of early tubal rupture. In the nine cases of abdominal pregnancy, there was one maternal death. In the 382 cases of early rupture, there were three maternal deaths. Four deaths in 391 proved instances of extra-uterine pregnancy result in a death rate of

TABLE II
TRENDS IN ECTOPIC PREGNANCY DEATH RATES
ALABAMA AND THE UNITED STATES
1945-1954

Year	ALABAMA			UNITED STATES		
	Ectopic Gestation Deaths	Live Births	Rate Per 100,000 Live Births	Ectopic Gestation Deaths	Live Births	Rate Per 100,000 Live Births
1945	8	70,321	11.4	334	2,735,456	12.2
1946	13	78,797	16.5	329	3,288,672	10.0
1947	13	88,116	14.8	300	3,699,940	8.1
1948	7	85,372	8.2	243	3,535,068	6.9
1949	6	84,418	7.1	203	3,559,529	5.7
1950	9	82,616	10.9	192	3,554,149	5.4
1951	10	83,462	12.0	180	3,750,890	4.8
1952	5	82,814	6.0	172	3,846,986	4.5
1953	7	82,077	8.5	162	3,909,000	4.1
1954	8	81,827	9.8	162	4,021,000	4.0
Ten Year Total	86	819,420	10.5	2,277	35,900,690	6.3

Source: Data for the years 1945-1952, inclusive, are from Vital Statistics of the United States, published annually by the U. S. Department of Health, Education and Welfare, Public Health Service. Data for 1953 and 1954 are from provisional reports of the U. S. Public Health Service and the Alabama State Bureau of Vital Statistics.

TABLE III
ECTOPIC GESTATION DEATHS
PER 100,000 LIVE BIRTHS

Year	Alabama	United States
1945	11.4%	12.2%
1954	9.8%	4.0%
Percent. Decrease	14.0%	67.2%

topic pregnancy suspected on initial admission to the hospital, although a typical history was recorded on each of the hospital charts.

DIAGNOSTIC AIDS

The most important aid in the diagnosis of extra-uterine pregnancy is a constant

3. Crawford, E., and Hutchinson, H.: A Decade of Reports of Tubal Pregnancies Condensed from the Literature plus 300 Consecutive Cases Without a Death, *Am. J. Obst. & Gynec.* 67: 568-584, 1954.

4. Leff, Benjamin: A 37-Year Survey of Ectopic Pregnancy, *Am. J. Obst. & Gynec.* 65: 1313-1317, 1953.

awareness of the possibility of the disease in women in the childbearing age who complain of abdominal pain. All patients with a ruptured tubal pregnancy will complain of abdominal pain. The only patients who do not have pain are those harboring an unruptured tubal pregnancy. Of the 382 patients in the Birmingham series with early ectopic pregnancy, 379 complained of abdominal pain and only three did not. Operation revealed unruptured tubal pregnancies in each of these three instances.

Of the nine patients with advanced abdominal pregnancies, all except one gave a history of abdominal pain at the time of initial rupture. The ninth patient harbored a calcified fetus which had been present for many years and whether or not she had pain at the time of the initial rupture could not be determined.

Additional aids in diagnosis are a history of amenorrhea or vaginal bleeding and, on physical examination, abdominal tenderness, tenderness on motion of the cervix, and a pelvic mass.

The most reliable specific diagnostic procedure is culdocentesis. In most patients with a ruptured tubal pregnancy blood gravitates to the cul-de-sac and can easily be aspirated through the posterior vaginal fornix. This is a simple office procedure and yields invaluable information. Blood from a ruptured tubal pregnancy will not clot on standing and this feature differentiates intra-abdominal hemorrhage from accidental needle puncture of a pelvic vessel, in which instance fresh blood is withdrawn that clots on standing.

Cul-de-sac puncture is a simple, harmless procedure and has wide application. It may be employed in the office, clinic or hospital without anesthesia. The posterior lip of the cervix is grasped with a tenaculum and the posterior vaginal fornix cleaned with a cotton pledget and painted with a solution of tincture of merthiolate. A sterile 18 gauge transfusion needle on a ten cubic centimeter Luerlock syringe is inserted into the cul-de-sac between the uterosacral ligaments. The puncture point varies, depending upon the length of the cervix. The technique of culdocentesis has been clearly depicted in previous publications by the author.^{5,6,7}

The peritoneum reacts to different intra-abdominal lesions which may be confused,

clinically, with ectopic pregnancy, causing the accumulation of various types of fluid in the cul-de-sac. These fluids have diagnostic value when aspirated and carefully studied. Occasionally, a ruptured corpus luteum of menstruation bleeds profusely into the peritoneal cavity and, of course, cul-de-sac aspiration in such an instance would be positive and identical with a ruptured tubal pregnancy. If there is *massive intra-abdominal hemorrhage*, laparotomy is indicated anyway.

There were only three patients in the Birmingham series covering a period of ten years who bled sufficiently from a ruptured corpus luteum to warrant laparotomy.

Generally, a characteristic fluid is found in the cul-de-sac in acute appendicitis without rupture, pelvic abscess, mittelschmerz, gastroenteritis, chronic pelvic inflammatory disease, intestinal obstruction, rupture of a peptic ulcer, and a twisted ovarian cyst.

In none of the four patients in the Birmingham series who died was cul-de-sac aspiration done, and in all it would have been diagnostic.

TREATMENT

The treatment of ectopic pregnancy is total excision of the affected tube. The only controversy revolves around the management of the patient with massive intra-abdominal hemorrhage incident to rupture of the impregnated tube.

Some authorities have stated that immediate operation should be done and the bleeding points secured. Several doctors have told me of experiences they have had in seeing the blood pressure rise and the pulse rate decline immediately upon clamping the bleeders. It is conceded that the phenomenon of hasty improvement following a hasty operation will occur in patients with minimal blood loss but to subject patients in blood loss shock to immediate operation, without first replacing some of the

5. Word, Buford: The Diagnosis and Treatment of Ectopic Pregnancy, An Analysis of One Hundred Forty Recent Cases, Surg., Gynec. & Obst. 92: 333-340, March 1951.

6. Word, Buford; Howe, E. H., and Blanton, Claiborne, Jr.: Aids in the Diagnosis and Treatment of Early Ectopic Pregnancy, J. M. A. Alabama 22: 73-79, Sept. 1952.

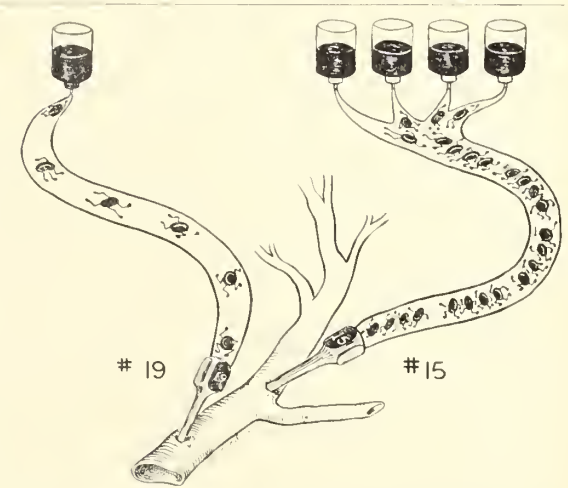
7. Word, Buford: Aids in the Diagnosis and Treatment of Ruptured Tubal Pregnancy, To be published in Obst. & Gynec.

blood loss, is to ignore the modern concept of hypovolemic shock and its management. Physiologic derangement resulting from massive intra-abdominal hemorrhage incident to a ruptured tubal pregnancy is similar to massive intra-abdominal hemorrhage from any other cause, such as a gunshot wound of the abdomen without perforation of the bowel or urinary tract. In all such cases, sufficient blood should be given preoperatively to improve the patient's condition, manifested by an elevation in blood pressure and a decline in the pulse rate. Aggressive blood transfusion therapy should be instituted while preparation is made for laparotomy. To say that no time should be wasted in transfusing a patient is a dangerous philosophy.

The amount of blood given in a specific period of time can be governed by the size of the needle selected and, of course, multiple ports of entry may be used, if the urgency demands and blood is available. By using a needle the inside diameter of which is twice the size of a 19 gauge needle, four

employed as a lifesaving measure at the University Hospital, in a patient in shock who had a rare blood type and for whom no immediate donors were available.

Total extirpation of the affected fallopian tube is the procedure of choice, in most instances. In reviewing many hospital charts during the past ten years, the notation "par-



Double the Calibre — Quadruple the Volume

Fig. 2. The inside diameter of a 15 gauge needle is double that of a 19 gauge needle and by its use four bottles of blood instead of one can be given in the same length of time.

tial salpingectomy" was frequently found on the operative record of patients operated upon for ectopic pregnancy. Two of these patients returned with a subsequent ectopic pregnancy in the tubal stump. If the un-

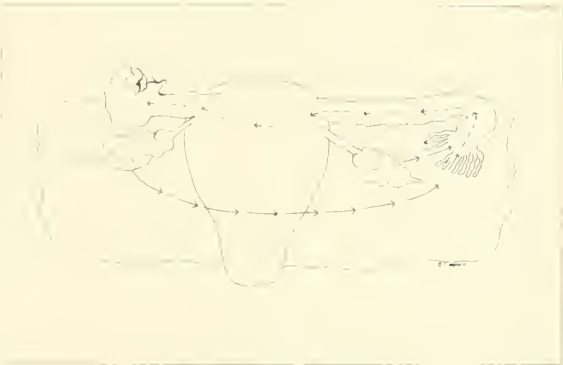


Fig. 3. This drawing illustrates how a repeat ectopic in the same tube may develop if only partial salpingectomy is done initially.

affected tube is patent and only partial salpingectomy done on the affected tube, an ideal situation for a subsequent ectopic pregnancy is created.

TABLE IV

TRANSFUSION NEEDLE CONVERSION
FROM GAUGE TO INCHES

Gauge	Inside Diameter
22	.016 inch
21	.020 inch
20	.023 inch
19	.027 inch
18	.033 inch
17	.042 inch
16	.047 inch
15	.054 inch
14	.063 inch
13	.071 inch

times as much blood can be given in the same length of time. Roughly, each time the size of the needle used is increased one gauge, the capacity for transfusing another unit of blood in the same period of time is added, and specifically, if a 15 gauge, instead of a 19 gauge needle is used, four bottles of blood, instead of one, may be given.

In localities where there is no blood bank, autotransfusion may be resorted to, provided the blood is fresh. Old blood from the peritoneal cavity should never be used. Autotransfusion was recently successfully

REPORT OF DEATHS FROM ECTOPIC PREGNANCY
IN ALABAMA DURING THE YEAR 1954

The following case reports are from the files of the Committee on Maternal and Child Health of the Medical Association of The State of Alabama.

Case 1. This 33 year old white, parous female was seen in her physician's office January 29, 1954. Her complaint was nausea, vomiting, breast engorgement, vague backache and lower abdominal cramps of three weeks duration. Examination revealed a soft, cyanotic cervix and a uterus one and a half times the normal size. No masses were palpable in either adnexal region. At 6:00 p. m. on the date of her initial examination the patient experienced severe lower abdominal pain and developed a slight bloody vaginal discharge. She was examined in her home at this time and was found to have a normal blood pressure and pulse rate. The abdomen was soft, but tenderness was present bilaterally. No rectal or vaginal examination was done. A diagnosis of intra-uterine pregnancy with threatened abortion was made. The patient was sedated but continued to experience severe abdominal cramps throughout the night. She was again seen at home at 8:00 a. m. on January 30, 1954. Blood pressure and pulse remained within the limits of normal, but acute tenderness was present over the entire lower abdomen, more marked on the left side. The patient was admitted to the hospital at 10:00 a. m. and given 2,000 cubic centimeters of five per cent dextrose in normal saline. A Pitocin drip was begun at 11:25 a. m. in an effort to complete the abortion. This seemed to exaggerate her abdominal pain. At 1:00 p. m. re-examination revealed a state of impending shock. There was abdominal rigidity in each lower quadrant, more pronounced in the left. Abdominal fullness and increased tenderness were also noted. Hemoglobin at this time was 5.6 grams per 100 cubic centimeters, red blood cell count 1,930,000, white blood cell count 20,400. The patient was given 500 cubic centimeters of whole blood and prepared for laparotomy. On her admission to the operating room, 1,000 cubic centimeters of blood was started. Under Sodium Pentothal anesthesia, the peritoneal cavity was entered, and found to be filled with blood. A ruptured tubal gestation was present in the isthmic portion of the left tube. A left salpingectomy was quickly performed. As the free blood in the peritoneal cavity was being siphoned out, it was noted

there was no aortic pulsation, and no heart beats were detected through the diaphragm. Heroic counter-measures for cardiac arrest were immediately instituted, including direct cardiac massage, novocain-ephedrine stimulation, blood, oxygen and artificial respiration, but the patient failed to respond and was pronounced dead at 6:00 p. m.

Comment: (The comment on this and subsequent case reports is that of the author and does not represent the opinion of the Committee on Maternal and Child Health or any other person or group.)

As previously stated, the greatest aid in the diagnosis of ectopic pregnancy is awareness of the possibility of the disease. This patient was seen on two occasions within a period of 24 hours and treated for a threatened abortion. It was not until the patient went into shock that ectopic pregnancy was suspected. She was in shock, blood pressure 40/0, when the operation was begun and the added trauma of the surgical procedure was more than she could stand. A better plan would have been to treat the patient aggressively with blood replacement therapy and wait until improvement was noted, as manifested by an elevation in blood pressure and a reduction in pulse rate. This patient had bled internally for approximately 28 hours before shock developed, which makes it reasonable to assume that blood could have been replaced faster than it was being lost. In the treatment of patients who develop hypovolemic shock due to massive intra-abdominal hemorrhage, releasing the patient from her state of shock by aggressive blood transfusion therapy must share equal importance with "clamping the bleeders." There is an old saying among surgeons in the British Isles which is apropos in this case: "Never put a cold patient on the operating table; you may take her off colder."

Case 2. The patient, a 35 year old colored female, who had complained to her family of pain in the abdomen for six to eight weeks, collapsed in her home on February 24, 1954, and died before she could be taken to a hospital. The patient had moved to Birmingham a short time before her death, and as far as could be determined, she had had no previous medical treatment. Autopsy revealed death to be due to massive intra-abdominal hemorrhage from a ruptured tubal pregnancy, right fallopian tube.

Comment: Although the patient did not

seek medical aid, the abdominal pain of six to eight weeks duration prior to her fatal collapse was indicative of continual intra-abdominal hemorrhage during that period of time, and had the patient sought medical aid, proper diagnosis and treatment would have prevented her death.

Case 3. This 35 year old colored female was first seen in the hospital on March 26, 1954, at which time she complained of abdominal pain, nausea, dizziness and vaginal spotting of two days duration. Her last menstrual period had been December 26, 1953. Physical examination revealed a colored female, weight 161 pounds, hemoglobin 7.5 grams per 100 cubic centimeters, blood pressure 110/60. Pelvic examination revealed the cervix to be soft, the fundus to be the size of an 11 or 12 weeks pregnancy, and a hard mass which was interpreted as being a uterine fibroid was noted. A moderate amount of abdominal tenderness was also present. A diagnosis of intra-uterine pregnancy, uterine fibroids and threatened abortion was made. The patient was given sedation and anti-anemic drugs and sent home with instructions to remain in bed. At 3:15 p. m. on March 27, 1954, the patient suddenly collapsed as she attempted to get out of bed, and died. Autopsy revealed the abdomen to be filled with blood incident to a ruptured ectopic pregnancy in the isthmic portion of the left fallopian tube.

Comment: Mental alertness for the disease is the best diagnostic aid.

Case 4. This white female, age 35, was admitted to the hospital by ambulance on June 12, 1954 in a state of shock. She had been treated with paregoric for an upset stomach for several days prior to admission. On the date of admission, the patient developed severe abdominal cramps, and was referred immediately to the hospital. A blood transfusion was begun and laparotomy immediately done. The patient was pulseless, and had no blood pressure at the time the abdomen was opened. The peritoneal cavity was found to be filled with blood, and a right ruptured ovarian pregnancy was present. Excision of the bleeding mass was quickly accomplished, during which time four pints of blood were given under pressure and through multiple ports of entry. The patient failed to respond, and was dead when removed from the operating table.

Comment: This patient was treated by

two different physicians before being referred to the operating surgeon. The first one treated her by telephone with paregoric for abdominal cramps, the second physician examined her at the time she had an episode of severe abdominal pain and made the correct diagnosis, referring her for immediate surgical treatment. Upon arrival at the hospital the patient was in acute shock. Blood was begun and the operation performed. She died on the operating table, having received a total of four bottles of blood during the operative procedure. Again, hasty operation failed to result in hasty improvement.

Case 5. This 28 year old colored female was admitted to the hospital emergency room in shock, at 11:00 a. m. on August 19, 1954. She had complained of abdominal pain and vaginal spotting for the past two weeks, the abdominal pain becoming more severe on the morning of admission. Her blood pressure was 60/0 and the pulse rate too fast to count. The abdomen was distended and appeared to be filled with fluid. A diagnosis of shock with massive intra-abdominal hemorrhage due to a ruptured ectopic pregnancy was made. The patient was placed in an oxygen tent and given two pints of whole blood. At 3:20 p. m., at laparotomy, the peritoneal cavity was found to be filled with blood, and a ruptured right tubal pregnancy was present. Two additional pints of blood were given during the operative procedure. The patient's condition was considered fair at the end of the operation. On the first postoperative day, August 20, her condition was satisfactory; Wangenstein suction was working well. Second postoperative day, August 21, temperature 104°, patient restless, abdomen distended, condition worse. Third postoperative day, August 22, temperature 106°, patient cold and clammy. Expired at 3:24 p. m. August 22, 1954. The patient had a toxic psychosis during all of her hospital stay.

Comment: Comment in this case is difficult in that no laboratory reports accompanied the clinical abstract, and it was not stated whether she received antibiotic therapy. For a patient with severe anemia due to massive intra-abdominal hemorrhage, a total of four units of whole blood seems insufficient, and since the patient developed a temperature of 104° and 106° on the second and third postoperative days, respec-

tively, generalized peritonitis is suspected. More blood and massive chemotherapy appears to have been indicated—if these measures were employed it was not stated in the clinical abstract)—although Wangenstein suction and oxygen were properly used as adjunctive measures.

Case 6. This 25 year old colored female died October 31, 1954. She was admitted to the hospital on October 20, 1954 in a state of collapse due to a ruptured tubal pregnancy. After three units of whole blood were given, the affected fallopian tube was excised. Her postoperative recovery in the hospital was uneventful. On the eleventh postoperative day the patient completely eviscerated at her home following a coughing spell. She was returned to the hospital and, after the abdominal wound was closed, she developed cardiac arrest and died before being removed from the operating table.

Comment: None.

Case 7. This 44 year old colored female was pronounced dead on arrival at the hospital by ambulance on November 1, 1954. She was first seen by her physician in June of 1954, at which time a diagnosis of intra-uterine pregnancy and uterine fibroids was made. On the morning of November 1, the patient called her doctor because she did not feel well, and was suffering slight abdominal pain. He advised hospitalization, which was refused by the patient. Later in the day the patient began to experience severe left upper quadrant pain and was seen by another physician. Her blood pressure was normal and no signs of shock were present. Hospitalization was again advised, but the patient's husband waited several hours before calling the ambulance. She died en-route to the hospital at approximately 6:00 p. m. on November 1, 1954. An autopsy was performed. Final diagnosis: Intra-abdominal pregnancy, approximately six months gestation, massive intra-abdominal hemorrhage from the placental site.

Comment: This death appears to have been due to the patient's failure to avail herself of prenatal care and to obey the physician's advice regarding hospitalization, when first seen on the day of her death.

Case 8. This patient, a 30 year old colored female, was admitted to the hospital at 10:00 a. m. December 22, 1954, with the chief complaint of abdominal pain and

vaginal bleeding for a period of three days. Her abdominal pain was so severe she was given a quarter grain of morphine on admission. She gave a history of eight weeks amenorrhea. Pelvic examination on admission to the hospital revealed a closed cervix with no placental tissue noted. Blood pressure was 112/60. Admitting diagnosis: Intra-uterine pregnancy with threatened abortion. The patient continued to complain of abdominal pain and an additional one-sixth of a grain of morphine was given. At 11:30 p. m. on the date of admission, the patient went into profound shock and died one and a half hours later.

Comment: Lack of awareness of the possibility of an ectopic pregnancy is evident in the management of this case.

SUMMARY AND CONCLUSION

1. The mortality for ectopic pregnancy per 100,000 live births in the state of Alabama during the past ten years has been compared with the mortality for ectopic pregnancy per 100,000 live births in the United States for the same period of time.

2. In 1945, the death rate for ectopic pregnancy in Alabama per 100,000 live births was less than it was for the United States as a whole, but during this ten-year period the state of Alabama showed a decrease in the ectopic pregnancy rate of only 14 per cent while the country as a whole showed a decrease of 67.2 per cent.

3. A study of 391 case histories of patients operated upon in two Birmingham hospitals for ectopic pregnancy, together with a report of deaths from ectopic pregnancy, included in this paper, reveals that the most important diagnostic aid is awareness of the possibility of this disease in any woman in the childbearing age who complains of *abdominal pain*.

4. Cul-de-sac aspiration is the best specific diagnostic procedure, with the exception of laparotomy.

5. In the treatment of patients in shock due to massive intra-abdominal hemorrhage incident to ruptured tubal pregnancy, aggressive blood transfusion therapy prior to incision must share equal importance with the actual operative procedure.

6. The timing of the laparotomy is of more importance than the procedure itself. Aggressive blood transfusion therapy should be given *before* and *during* the operation, instead of *during* and *after*.

MASSIVE HEMORRHAGE DUE TO ESOPHAGEAL HIATUS HERNIA

HOWARD S. J. WALKER, JR., M. D.

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Diaphragmatic hernias are fairly common. They may be congenital, traumatic, or developmental, due to mechanical factors.

DEFINITION

Herniation of abdominal contents into the chest may occur through any orifice in the diaphragm, but the vast majority of these go through the esophageal hiatus and are therefore termed esophageal hiatus hernias. Of 605 operations for diaphragmatic hernia performed by Harrington of the Mayo Clinic, 489 (81%) were for hernias through the esophageal hiatus.

CLASSIFICATION

Three types of hiatal hernia may be recognized:

1. *Sliding Hiatal Hernia*. Probably 85% of hiatal hernias belong in this category. In them the esophago-gastric junction is displaced upward into the chest so that the esophagus may appear shortened and a portion of the stomach lies in the posterior

2. *Parahiatal Hernia*. Most of the non-sliding hernias are parahiatal. The esophagus maintains its normal length, and the esophago-gastric junction remains at the

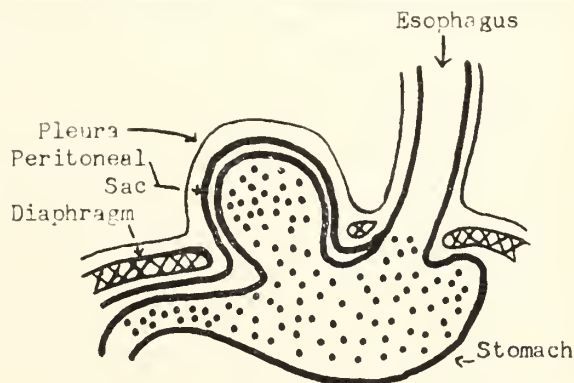


Fig. 2

Parahiatal type of esophageal hiatus hernia in which there is a complete peritoneal sac, and the esophago-gastric junction is at the level of the diaphragm. This is a relatively rare type of hernia.

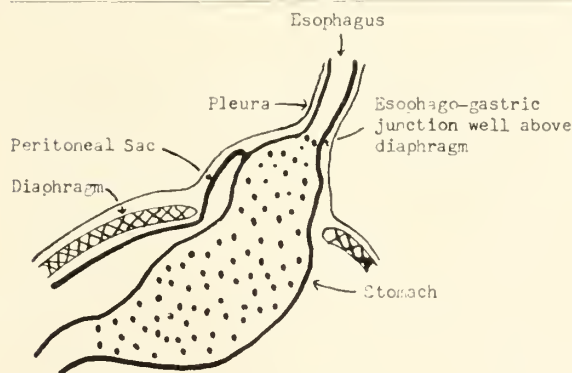


Fig. 1

Sliding type esophageal hiatal hernia in which there is a partial sac and the lower end of the esophagus is above the diaphragm. This is the most common type of hiatal hernia.

mediastinum. A variable amount of peritoneum may be pulled into the chest on the anterior aspect of the stomach to form a sac in the same manner as a sliding hernia in the inguinal region. Since the normal esophagus is elastic and on stretch, it retracts as the lower end moves upward, but it can usually be easily pulled back down to the normal position at surgery. A true short esophagus is relatively rare.

level of the diaphragm. A portion of the stomach or other abdominal viscera herniates into the chest alongside the esophagus. There is usually a complete peritoneal sac.

3. *Miscellaneous*. There are various combinations of the above, and also the true short esophagus of a congenital nature with a thoracic stomach.

All of these miscellaneous hernias together comprise a very small percentage of the total.

SYMPTOMATOLOGY

Hiatal hernias may cause symptoms of almost any upper abdominal disease. This is understandable since disturbance of the function of the stomach is the basis of the complaints. Less often appreciated is the fact that diaphragmatic hernias may simulate angina pectoris, and the symptoms can be completely relieved by repair.

The commonest erroneous diagnoses in order of frequency found by Harrington were: cholecystitis, cholelithiasis, gastric ulcer, duodenal ulcer, hyperacidity, secondary anemia, cardiac disease, carcinoma of the cardia, stricture of the esophagus, in-

testinal obstruction, appendicitis, and thoracic tumor.

Sweet lists the symptoms of 111 cases of hiatal hernia without reference to surgery as follows:

Pain (oppression, etc.)	
Location:	
Thoracic	40
Abdominal	52
Back	1
Dyspepsia	40
Vomiting	43
Dysphagia	21
Obstruction	13
Bleeding	36
Chronic with anemia	11
Episodic	25
(Intermittent often massive)	
Symptoms mistaken at first for coronary disease	6
Concurrent diagnosis of coronary disease	14

Bleeding from hiatus hernia is usually due to one of the following mechanisms:

1. *Peptic Esophagitis.* This results from the regurgitation of gastric contents into the esophagus, which tolerates these strong juices poorly. The mucous membrane becomes inflamed, eroded, ulcerated, fibrosed, and sometimes stenotic and shortened. There is chronic blood loss from the inflammation, but this is more ooze than flow, and is usually silent except for the production of anemia.

2. *Gastric Ulceration.* The portion of the stomach above the diaphragm becomes ulcerated and may bleed slowly or violently. There may be hematemesis, tarry stools, anemia, shock, etc. Retention of gastric juices in the herniated portion of the stomach is probably the cause of the ulceration because the incidence of ulceration seems to be definitely more than coincidental.

Costello reported on 300 cases of massive hematemesis studied at the St. Louis City Hospital in which he listed the following causes:

1. Duodenal Ulcer.....	57 %
2. Gastric Ulcer	11 %
3. Acute Gastritis	14 %
4. Varices	8 %
5. Chronic Gastritis	4 %
6. Gastric Carcinoma	1.3%
7. Marginal Ulcer	1.3%
8. No Diagnosis	1.3%
9. Carcinoma of Esophagus	1 %
10. Curling Ulcer.....	0.6%
11. Trauma	0.3%

Hoerr, Dunphy, and Gray collected 191 cases of massive upper gastro-intestinal hemorrhage admitted to the Peter Bent Brigham Hospital from January 1940 to June 1947 and noted very similar diagnoses.

Neither paper lists diaphragmatic hernia as a cause of massive gastro-intestinal bleeding. However, it is important enough to require consideration in the differential diagnosis of any type of gastro-intestinal bleeding.

DIAGNOSIS

This is usually readily made by gastro-intestinal x-rays, but may be overlooked unless the radiologist is alert to the possibility. Sometimes special positions are required to demonstrate the hernia. Esophagoscopy may be quite helpful in diagnosis, and this is particularly true when there is a decision between esophagitis, varices, tumor, stricture, etc. Once the condition is thought of, it is usually an easy matter to confirm the diagnosis.

TREATMENT

The treatment of a hernia of moderate symptomatology may be supportive, but once there has been marked blood loss, or any other severe symptom, surgical repair should be done.

Phrenic Crush. This is occasionally helpful, but should rarely be done because the long term results are not very satisfactory, and are sometimes dangerous. If later repair is required, paralysis of the diaphragm produces further decrease in the vital capacity.

Herniorrhaphy. This is the procedure of choice, and certain criteria must usually be fulfilled in order to produce good results. These are:

1. The stomach must be replaced in the abdomen.
2. The sac must be removed or obliterated.
3. The hiatus must be reconstructed.
4. The acute angle of the esophago-gastric junction should be preserved. This will usually be done if the first three criteria are fulfilled, but it should be kept in mind.

This operation may be done through the abdomen, or the chest, depending on the preference of the operator, and the condition of the patient. Probably the easiest way is to place the patient with his right

side down and enter the chest through the left seventh interspace laterally without cutting the costal margin. The position is easy on elderly patients, and the exposure is adequate.

RESULTS

The symptoms of a hiatal hernia can be relieved in a very high percentage of cases by proper surgery. Even when there is extensive bleeding from the hernia, simple repair is all that is required to cure this. Of 21 patients operated on by Sweet for hemorrhage, all were cured by herniorrhaphy.

The following case reports concern two patients who had massive gastro-intestinal hemorrhage from large hiatal hernias, and were apparently controlled by operation.

CASE REPORTS

Case 1. The patient is a 74 year old white male who entered the Mobile Infirmary on November 30, 1954 complaining of weakness and dyspnea of a few hours duration. He had previously been in good health except for moderate asthma, bilateral varicose veins, and a reducible indirect right inguinal hernia, all of many years duration. His blood pressure on admission was 60/?, there were asthmatic wheezes throughout the chest, but no localizing symptoms. Shortly after admission he passed a copious black stool which was thought to be indicative of gastric hemorrhage.

The blood count showed 5.1 grams of hemoglobin, 1.74 RBC, and 8,850 WBC. There was no more evidence of bleeding, and a G-I series done on December 4 demonstrated a large hiatal hernia with about 1/3 of the stomach in the chest. Since this was thought to be the cause of his bleeding, he was prepared for surgery. While this was being done, the inguinal hernia became incarcerated, and a thrombophlebitis developed in the left saphenous system.

On December 9, 1954, the saphenous and superficial femoral veins were ligated bilaterally, and the inguinal hernia was repaired with tantalum mesh. Two days later he started bleeding so severely that he was operated on as an emergency, and the diaphragmatic hernia was repaired through the 7th left interspace, and the hiatus was transplanted anteriorly, as recommended by Merendino.

Postoperatively he developed severe hiccups which lasted 4 days and caused more

gastric bleeding. He gradually improved and was discharged from the hospital on December 28, 1954. Fourteen pints of blood were given before the diaphragmatic hernia was repaired and nine pints afterward. At time of discharge from the hospital his blood count showed 10.2 grams of hemoglobin and 3.61 RBC.

Follow-Up: He has been seen at frequent intervals since and numerous hemoglobin determinations made. These have remained at 12.0 grams or better. He is active, and says that he can do more now than he could for many years before surgery. Despite the severe hemorrhage, which required twenty-three pints of blood to maintain his circulation before and after surgery, there has been no evidence of further blood loss following simple repair of the large diaphragmatic hernia. (He has been followed by Dr. R. J. Ceravolo.)

Case 2. The patient was a 63 year old white male who was admitted to the Mobile County Hospital on January 30, 1954 com-



Fig. 3. Routine chest plate of case #2 before surgery showing huge heart, and slight pulmonary edema.

plaining of swelling of the ankles, weakness and fainting spells. He had been bothered by a right inguinal hernia for many years. Work-up revealed a huge heart, marked ar-

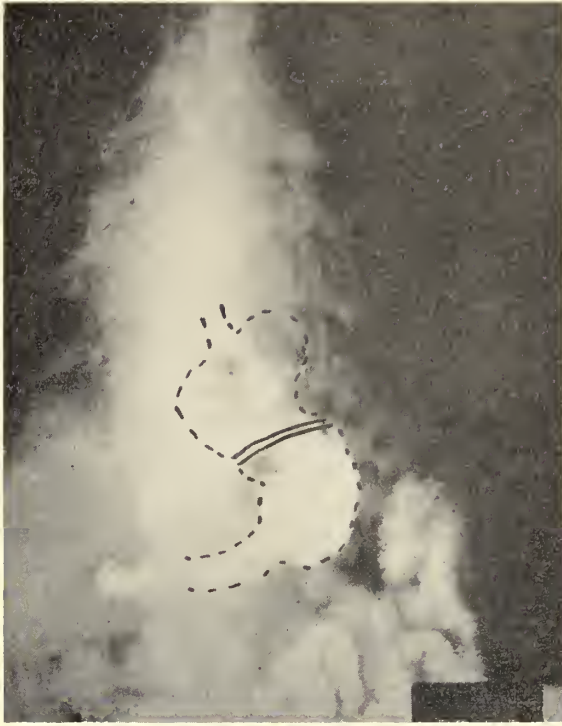


Fig. 4. Barium swallow with the stomach outlined in ink. The two cross lines represent the diaphragm. About one half of the stomach lies above it. Case #2.

teriosclerosis, auricular fibrillation and moderate peripheral edema. The blood count was 2.6 grams of hemoglobin, 1.9 RBC, and 11,300 WBC. A G-I series revealed a huge diaphragmatic hernia, and a tremendously enlarged heart.

The diaphragmatic hernia was repaired through the left 7th interspace on March 1, 1954, and the esophago-gastric junction was transplanted forward in the diaphragm. He was given ten pints of blood before and during surgery. The postoperative course was uneventful, and he was discharged from the hospital on March 30.

The inguinal hernia was repaired at a later hospitalization on May 6, 1954.

Follow-Up: A blood count three months after surgery showed 11.75 grams of hemoglobin. He had intermittent episodes of cardiac decompensation and was last seen alive fourteen months after the diaphragmatic hernia was repaired, at which time there was no evidence of blood loss since surgery. He died two weeks after this, and the exact cause of death was never determined, but may have been due to his advanced heart disease.

DISCUSSION

Herniation of the stomach through the

esophageal hiatus is a relatively common condition which may be innocuous or serious. Hemorrhage of all degrees may be caused by this. It may be slight, massive, intermittent, continuous, associated with anemia, shock, hematemesis, tarry stools, or death. Hiatus hernia as a cause of blood loss should be considered in any case of unexplained anemia. Special G-I x-rays will usually adequately demonstrate any significant hernia, if it be considered in the differential diagnosis. A small sliding hernia may be just as productive of symptoms as a large one. Provided a hiatus hernia is the cause of gastro-intestinal bleeding, simple surgical correction of the condition will stop the blood loss. Phrenic crush is not recommended. Elderly, poor risk patients will tolerate a supra-diaphragmatic repair of a hiatus hernia with excision of the sac, replacement of the stomach in the abdomen, and reconstruction of the hiatus.

SUMMARY

1. Hiatus hernia should be considered in the differential diagnosis of gastro-intestinal hemorrhage.
2. Surgical correction of the hernia will halt the bleeding.
3. Two illustrative cases are presented.

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CONGENITAL ABSENCE OF THE UTERUS

CASE REPORT

HAYWOOD S. BARTLETT, M. D.

Montgomery, Alabama

A white female, fifteen years of age, whose chief complaint was low abdominal pain and amenorrhea, came for examination on December 3, 1955. The pain was not constant and seemed to appear two or three days of each month. For the last four months she had noticed that it occurred at about the same time of the month. She had never menstruated and had had no vaginal discharge. When the patient was five years old, her mother was told by the pediatrician in attendance that the patient had an imperforate hymen.

Physical examination revealed a well developed, well nourished, very alert typical female, not acutely ill. There was no sign of endocrine disturbance. Her skin seemed of normal texture. The thyroid was not enlarged. The breasts were well developed and the areola tissue surrounding the nipples seemed normally pigmented. The distribution of pubic and axillary hair seemed normal. There was some tenderness on palpation over both right and left quadrants of the abdomen. There was no muscle rigidity. The external genitalia, namely, the clitoris, urethra, and labia majora and minora, appeared normal. The hymen was imperforate. The color of the hymen was normal and there was no bulging.

The patient was admitted to the hospital and an incision was made through the hymen. The examining finger, on entrance into the vagina, could not locate either the cervix or the uterus. There seemed to be only a firm, thickened band which extended transversely across the lower pelvis. Neither ovary nor tube could be palpated. The vaginal mucosa appeared normal. A diagnosis of congenital absence of the uterus was made. This diagnosis was confirmed by an exploratory laparotomy.

The uterus, as such, was found to be absent. There was a fibrous band about $4\frac{1}{2}$ inches long and $\frac{1}{4}$ inch in width, covered by peritoneum, which extended transversely across the pelvis. At each end this band appeared somewhat bulbous. Attached to the bulbous portion was a very short round ligament on both sides and a very short fallopian tube. The fimbriated ends of the

tubes appeared normal. Both right and left ovaries appeared normal, and on the right ovary there was visible a recent hemorrhagic follicle. No cervix could be palpated. The bladder appeared normal. Both right and left kidneys seemed normal in size, shape and position, as did the other abdominal organs. The appendix was located and found to be retrocecal. It was removed.

COMMENT

Amenorrhea, due to congenital absence of the uterus, in this case the complete non-union of the mullerian ducts, is unusual in that no other congenital anomalies, except imperforate hymen, was found. An exploratory laparotomy was felt indicated because of the incidence and rhythmic appearance of abdominal pain and the future social problem this young woman might encounter. The importance of a complete and thorough physical examination in young girls complaining of vague abdominal symptoms with amenorrhea is of great significance.

Usually Fatal Skin Disease Controlled by ACTH—Further evidence of the value of corticotropin (ACTH) in treating a skin disease which usually results in death was reported in the March 24th Journal of the American Medical Association.

Dr. Richard B. Stoughton, Chicago, used the synthetic hormone for pemphigus vulgaris, a chronic and usually fatal disease of unknown origin. It causes blisters on the skin and involves the general health of the patient.

He gave corticotropin to nine patients for periods ranging from one and a half to four and a half years. All but one of the patients probably would have died of the disease if they had not received corticotropin.

Corticotropin never failed to suppress the blister formation, although it had no effect on the underlying cause of the disease. Side-effects from the hormone were "surprisingly" few, Dr. Stoughton said.

All the patients had periods during which the disease process was quiet and required no corticotropin, but they also had flare-ups during which greatly increased doses were needed to control the disease. Generally, however, dosage needs were "remarkably constant," which means treatment except for occasional hospitalization can be continued on an outpatient basis indefinitely, he said.

Adequate control of pemphigus vulgaris with corticotropin for indefinite periods of time seems entirely possible, Dr. Stoughton concluded.

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THE MONTH IN WASHINGTON

A little-publicized study group of eight physicians and scientists has submitted a report to the Secretary of Health, Education, and Welfare that promises to stimulate considerable debate by all interested in medical research, including members of Congress.

The committee was appointed by the National Science Foundation a year ago at the request of former HEW Secretary Hobby for "a critical review" of the scope and distribution of all phases of medical research where U. S. funds are used. Heading the committee was Dr. C. N. H. Long of the Yale School of Medicine.

Three basic proposals of the committee are:

1st. That research within the National Institutes of Health be levelled off, and policy and personnel matters there be brought under the scrutiny of an advisory board of non-governmental medical scientists.

2nd. That other research under the Public Health Service, including teaching grants to institutions and fellowships, be put under a new Office of Medical Research and Training reporting directly to the HEW Secretary and outside the control of the Service.

3rd. That emphasis be placed on general research rather than the present trend of specific grants for specific disease studies, the so-called categorical approach.

On receipt of the report, Secretary Folsom promised it would be studied "intensively" both by HEW and PHS officials, but he set no time deadlines.

The Long Committee noted the tremendous growth in federal medical research during and since World War II and the increasing role played by the Public Health Service. While conceding that the Service has done its job effectively, the committee felt that the time has come to reexamine the concentration of activities under one agency.

On its first point the committee said that the National Institutes of Health are making a major contribution in medical research and that senior appointments there should actually become "the most sought after in the country." It suggested legislation that would permit employment of research scientists at the Institutes without regard to commissioning in the PHS Corps or salary limitations imposed by civil service.

On its second basic proposal, the committee recommended that the new agency have authority over (a) unrestricted, long-term institutional grants, (b) grants for research, both categorical and non-categorical, (c) fellowships and traineeships in medical and related areas, and (d) grants for construction of research and teaching facilities.

Commenting on the categorical approach to research, the committee said the public has been "led to believe, consciously or unconsciously, that the donation of sufficient sums of money is all that is needed to eradicate diseases which have plagued mankind for centuries."

In Congress, any move away from categorical grants in medical research is certain to produce fireworks. Some Senators and Representatives believe it's Congress' responsibility to pinpoint where money it appropriates is to be spent, and they are not inclined to make an exception for research money.

* * *

Two bills on military medical legislation went through the House without change, after detailed hearings and study by a subcommittee. The expectation is that action on them will not be long delayed in the Senate.

One is designed to make military medical careers more attractive by allowing credit for time spent in medical school and in-

ternship, and setting up a series of three \$50 per month raises after three, six and 10 years' service. These would be in addition to the present \$100 per month special pay for medical officers. Public Health Service medical officers would benefit, as well as those in Army, Navy and Air Force.

The other bill, well on its way to becoming a law, allows dependents of servicemen to receive private hospital and medical care, with the government paying the costs of the insurance or health plan coverage and the dependent the first \$25 of the hospital bill. The Secretary of Defense, however, could limit or deny such private care in areas where he determines that military medical facilities are adequate to handle the service families.

* * *

Some of the pharmaceutical houses have told Secretary Folsom that they plan to use more personnel and equipment to step up production of Salk Vaccine, but his expectation still is that it will be "many months" before there will be enough vaccine for three shots for "all who need them."

* * *

Almost all medical programs handled by the U. S. Public Health Service are virtually assured of comfortable increases in money for next fiscal year. The House approved recommendations of its Appropriations Committee without change. The only large reduction was \$19 million in money for the Hill-Burton hospital construction program, the committee explaining this action was taken because the "new" HB program (for clinics, chronically ill hospitals, nursing homes, rehabilitation centers) is getting off to a slow start.

* * *

A new suggestion for helping to pay for medical care comes from Rep. Charles S. Gubser (R., Calif.). He is proposing that full income tax deductions be allowed for all medical expenses of children under six years of age.

TRANQUILIZING DRUGS

A "new ray of hope," the tranquilizing drugs, plus more psychiatrists, offer the best answer to the rising incidence of mental illness, Dr. Nicholas A. Bercel of the University of Southern California School of Medicine told a meeting of the American

Pharmaceutical Manufacturers Association in Los Angeles.

He discussed three of the more widely used tranquilizers, Reserpine, Chlorpromazine and Meprobamate and reported that Meprobamate is the "best, safest and simplest drug for ordinary tension that besets so many otherwise healthy people." He also suggested the possibility of its use by the average "nervous" person to eliminate the use of alcohol and barbiturates.

The anatomy of anxiety and the inadequacies of earlier drugs and psychotherapy in eliminating the symptom were outlined. Barbiturates and other sedatives were held inadequate because of their action on general rather than specific areas of the nervous system and because of the problems of tolerance, addiction and impermanence of action.

The shortcomings of psychotherapy in solving anxiety problems include the cost; the inability in many cases to even apply it because of the nature of underlying psychiatric disturbances; and, in many cases, the inability of psychotherapy to do more than help the patient bear with external realities that cannot be changed, rather than to solve the problem.

Insulin and electric shock, while effective in treating depressions, were held inadequate in psychoses where anxiety is the major symptom.

The area of indication for tranquilization with drugs, Dr. Bercel said, encompasses "practically the whole medical field" because of the wide range of conditions and symptoms to which anxiety is a contributory factor. Use of the tranquilizers, therefore, is not limited to psychiatric practice.

Use of the tranquilizing drugs in mental institutions was discussed and the subsequent advantages outlined, particularly the fact that "the discharge rate went up and as we learned more and more of these drugs, the reclamation for useful life of the mentally ill is going up and up."

Dr. Bercel warned of the dangers of indiscriminate use of the drugs, particularly in treating seriously depressed patients, who, he feels, should be given electroshock treatment instead. Side effects of Reserpine and Chlorpromazine were noted, and use of the two drugs in combination was suggested as a way to obviate such side effects as may be caused by the excessive dosage of either.

SYMPOSIUM ON TUBERCULOSIS

The fifth annual Symposium for General Practitioners on Tuberculosis and other Chronic Pulmonary Diseases will be held in Saranac Lake, New York, from July 9th to 13th, 1956. It is approved for 26 hours of formal credit for members of the American Academy of General Practice.

This five-day course is designed particularly for general practitioners and presented over a period short enough so that they may readily attend. Many of the sessions are informal panel discussions with ample opportunity for questions from the audience.

Sessions will be held in the various sanatoria, hospitals and laboratories in the Saranac Lake area. The faculty will consist of physicians, surgeons and scientists from Saranac Lake, as well as guest lecturers.

Many doctors attending previous sessions of this symposium have brought their families with them to enjoy the many vacation facilities of the surrounding Adirondack Mountains. So that families may have the use of the family car, free bus transportation will be provided to the various meeting places for the doctors attending the course. Excellent housing accommodations are available in and around Saranac Lake.

The registration fee for the symposium is \$40.00. Further information and copies of the program can be obtained by writing Dr. Edward N. Packard, General Chairman, Symposium for General Practitioners, P. O. Box 262, Saranac Lake, N. Y.

Pyorrhea Requires Both Dental and Medical Care—Diagnosis and treatment of bleeding gums must be a cooperative project of doctor and dentist, an editorial in the March 24th Journal of the American Medical Association said.

"Periodontal disease is by far the major cause of tooth loss in individuals over 35 years of age," it said. Inflammation of the gums is present to some degree in most persons who eat chiefly soft and cooked foods, and gums may bleed from a variety of causes, local or systemic.

Local irritation of the gums is almost always the primary cause, although occasionally some underlying systemic factor may cause bleeding in the absence of local irritation. Most frequent local causes are tartar accumulation, injury, abnormalities in the bite, food impaction, and ill-fitting dentures or fillings.

It would be a mistake, however, to consider all gum bleeding as a sign of uncomplicated gingivitis or periodontitis, as is frequently done, the editorial said. The bleeding may be a sign of serious general disturbance, such as scurvy, pellagra, diabetes, leukemia, pregnancy, allergy, or lead, bismuth, or mercury poisoning.

The editorial said that local treatment by the dentist can correct the mouth condition if there is no underlying systemic disturbance.

THE ASSOCIATION FORUM

(Under this heading will appear, from time to time, as occasion may arise, contributions having a direct bearing on the general policies, functions and interests of the Association. Articles submitted should be of an impersonal nature.)

IT STILL MAKES SENSE

W. A. Dozier, Jr.

Director of Public Relations

Recently there came to hand an editorial by Mr. Thurman Sensing in the December 15, 1954 issue of the Southern States Industrial Council *Bulletin*. It was called "The Delusion of Federal Aid." Now, after more than a year, it is still apropos and perhaps more important than ever. We are entering upon political campaigns wherein claims and promises will be larger and louder than ever. It might behoove us to go back and touch first base, and maybe Mr. Sensing's words will help.

"Federal aid is, in effect, the federal government saying to the states:

" 'The people in your states need some aid. So we are going to tax them, bring the

money to Washington, deduct the expenses of administering the aid, and then provide the aid they need with their own money.'

"It is just as if a doctor said to his patient:

" 'You need a blood transfusion. I am going to take some blood out of your left arm; I am going to put it back in your right arm. I will spill some in the process, but I am going to give you a blood transfusion with your own blood.'

"There is, actually, no such thing as federal aid. The best that can be said for it is that it is a redistribution of wealth.

"In fact, it was on this basis that the New Deal first attempted to 'buy' the South. The South generally never has been, and is not, sympathetic to state control and regimentation of the individual. When the advocates of these practices got in control of the Dem-

ocratic Party, to which the South has traditionally belonged, they therefore did not find a sympathetic response in the South.

"The New Deal thereupon hit upon the device of bribing the South with federal aid, knowing full well—as has later been ruled by the Supreme Court—that whatever the government subsidizes it has the right to control.

"The South was susceptible to this enticement. The South had not yet fully recovered from the loss of a large part of its assets during civil war nor from the hardships of reconstruction that followed. Its per capita wealth and per capita income were still considerably below the national average. The New Deal government—through federal aid—promised to remedy this discrepancy by transferring money collected from the wealthier states to the poorer states of the South.

"This bait was swallowed by many people in the South, but not—and for this the whole nation may be grateful—by any means all the people. The South accepted the federal aid because it was instituted as a national policy, and the South remained Democratic because the Republican Party offered them no real alternative—but it was mainly the influence of Southern members of Congress, aligning themselves with those of like mind from other parts of the country, that prevented our nation from going all the way down the road to state socialism in the following years.

"In the meantime, the South has been gradually closing the gap in per capita wealth and income. Nor is this due in any way to federal aid. All the reasons for material prosperity have existed in the South all along—it simply takes time to bring it about.

"At the same time, though, the cancerous delusion of federal aid has been gradually eating away at the financial and moral responsibility of the people. Until now we are seeing a strange thing happen! The Governor of Michigan and the Governor-Elect of New York—two of the richest states in the union—have both agreed that their respective states must have more federal aid for schools and for such other things as housing and highways.

"Now that's a pretty how-de-do. Where's the money coming from? Well, where else can it come from except the states of Mis-

issippi and Arkansas, whose per capita wealth and income are still the lowest in the union? And from the other forty-four states, all of whom are less wealthy than New York and Michigan. So now we are begging from each other!

"All of which very clearly shows up the fallacy of federal aid. It all indicates how the 'getting something for nothing' habit, like the dope habit, gains an insidious control over people until they lose all sense of moral values.

"Carried to its ultimate end, of course, federal aid means complete state socialism. And state socialism carried to its ultimate end means communism. The people of this country do not want that.

"What the states of this nation need—South or elsewhere—is not federal aid but economy in the federal government. Then they would have all the money they need to provide their own wants with their own money."

Pediatrician Recommends "Fencing In" Toddlers—An Evanston, Ill., pediatrician has recommended that preschool children be separated from "adult gadgets and trouble" for at least half of their play time.

Dr. E. Robbins Kimball said this will help the child in his adjustment and adaptability by allowing him to escape the adult "no" for part of his time and by slowing down the expansion of his world to the point where he can handle it.

A child does not really understand what belongs to him and what belongs to his parents until he is four years old. Until then he should be relieved of the responsibility of not touching the possessions of adults for half of his playing hours (four hours a day), Dr. Kimball said in the March 24th Journal of the American Medical Association.

Because parents cannot live in a nursery, Dr. Kimball suggested that the child be separated from the adult world by means of a play pen, gated room or porch, fenced yard, or nursery school, depending on his age.

Such "compartmentation" gives nervous mothers relief and decreases the number of household accidents. In addition, it prevents the child from developing habitual patterns of resistance to adults as they try to direct him.

In a study of 363 children, followed for five to 10 years, Dr. Kimball found that a child adapted to new situations more readily as soon as he escaped the adult "no" for half of his play time. In fact, toddlers' adaptability increased fourfold with "fencing in."

He also found that being a first child, having nervous parents, and not being breast fed, had an adverse effect on the child's adaptability.

Many first children had difficulties in adjustment because their parents, being unfamiliar with growth, expected them to perform at about twice their developmental level.

STATE DEPARTMENT OF HEALTH

BUREAU OF ADMINISTRATION**D. G. Gill, M. D.****State Health Officer****BATTLING POLIO WITH VACCINE****Contributed by****Nadine Pitts, Director****Division of Public Health Education**

A question frequently asked these days is "Where do we stand on poliomyelitis?" In other words, what have we done, how much progress has been made, and what yet remains to be done? A relatively easy answer might have been given to such a question several years ago. In the 1940's and even as late as the early 1950's, there was not too much to offer in the way of preventing and controlling this crippling disease. It is true that treatment of poliomyelitis, once it had occurred, had reached a high point even then. Lifesaving equipment such as iron lungs and other beneficial therapy had already been brought to bear on this disease. But the only help health officials could give was advice on creating an unfavorable climate for the poliomyelitis viruses, based on the currently held theories of transmission. Most everyone became familiar with this advice, which included such general rules as the avoidance of excessive fatigue and such operations as tonsillectomies for children in the summer months, except when absolutely necessary. As a matter of fact, these words of caution have not "gone out of style." It is still wise to remember and abide by them.

But today, the present poliomyelitis picture, as well as the outlook for the future, is vastly different. Because of the differences, no easy answers can be given to such questions as "Where do we stand on poliomyelitis?" For where we stood yesterday we do not stand today. And tomorrow's progress undoubtedly will be greater still. In other words, the best news about poliomyelitis today is that we are no longer at a standstill.

Most everyone knows the principal reason why greater progress against poliomyelitis is possible today than ever before. The highly effective Salk vaccine, taking its

name from that of the discoverer Dr. Jonas E. Salk, is the prime reason why. But what many people may not realize is how the vaccine works, the degree of its effectiveness and its potentialities for a considerable degree of control over the disease poliomyelitis.

The Salk vaccine, first of all, is highly effective but not a perfect one. In fact, it may not be possible ever to make the anti-poliomyelitis agent completely effective and thus perfect. As one health official, writing in a recent issue of *Texas Health Bulletin*, published by the Texas State Department of Health, puts it, "The perfect vaccine is a myth, an unattainable ideal . . ." To illustrate, this official points out that a particular vaccine may completely protect 999 people against a certain disease. Yet, it may cause a severe reaction, or provide no protection at all, for the thousandth person it is given to.

Just how effective is the Salk vaccine? A study which followed the mass field trials for the vaccine in 1954 gives us some information on its value. The study group compared cases of poliomyelitis in vaccinated and unvaccinated children. And they determined that the vaccine was 60 to 70 per cent effective in preventing that form of the disease caused by Type I virus, and about 90 per cent effective for cases caused by virus Types II and III. In other words, the vaccine was 60 to 90 per cent effective in preventing the development of paralytic poliomyelitis.

That was the scientific evaluation of the vaccine in the spring of 1955. However, information and experience gained since that time have prompted the belief that the vaccine may actually be more effective than the original study indicated. Moreover, medical science is continuing its work to improve the present vaccine, to develop a more potent but safe one, if that is possible, which will prevent an even larger number of cases. And with the great stride forward in virus research which the initial discovery of the vaccine itself represented, there is no reason to think the hoped-for improvements cannot be accomplished.

No one, of course, knows at this time just how long the vaccine will provide protection from poliomyelitis. However, there are good reasons for believing that immunity will last several years. Some persons who were vaccinated in early experiments, perhaps in about 1953, still retained immunity from the disease late in the year 1955. Only time will tell whether the same persons will still be immune in 1960, for example.

By what mechanism do three injections of the reddish-colored Salk vaccine give the inoculated individual protection against poliomyelitis? A discussion, first, of how the vaccine is made may help to answer this question. The vaccine is composed of non-infectious poliomyelitis viruses. Although the viruses have been stripped of their ability to cripple, they retain the power to make most people react just as they would if untreated viruses entered their bodies and caused disease.

All three types of virus are grown on cells of monkey kidney tissue in a culture medium of many ingredients. A recently revised publication of the National Foundation for Infantile Paralysis gives us a description of the vaccine-making process:

"When sufficient virus has grown in these cells (of monkey kidney tissue), it is made noninfectious by treatment with formaldehyde. This treatment is continued for a sufficient time to insure that its use in proper dosage will not cause polio infection in any person in whom it is injected."

Throughout the entire manufacturing process, preparation is carried out under rules and regulations set up by the Division of Biologics Standards of the National Institutes of Health. This is the government agency which licenses all vaccines and other biologic materials, such as drugs. Not only is the vaccine tested for safety by the drug company which manufactures it but by this government agency as well.

Now for the mechanism of immunization. Once a person has been injected, usually in the muscles of the arm, with the vaccine, that person begins the development of active immunity to poliomyelitis. Active immunity is the phrase applied to protection gained from exposure or infection with a disease-producing organism. The noninfectious viruses in the poliomyelitis vaccine cause the body to fight against the viruses,

and to produce tiny, disease-fighting cells called antibodies in the bloodstream.

The Salk vaccine is given as a series of three immunizations. The first injection begins to take effect from seven to ten days afterwards. If a blood sample is taken then and examined in the laboratory, a few antibodies against poliomyelitis are detected in the bloodstream. And the second shot, given usually four weeks after the first, brings still a sharper rise in the blood's level or number of antibodies. But it is the third or booster dose of vaccine which is known to give several years of protection. This third and final injection may be given seven months to a year after the second. Again, only time will tell if and when still other injections are needed to give long-lasting protection.

The antipoliomyelitis vaccine, then, is designed to prevent polio. It must not be confused with an agent for cure. For example, the vaccine cannot protect the person who has been exposed to the polio virus and who is already developing the disease. Also, as we pointed out earlier, no vaccine is perfect, and neither is the poliomyelitis vaccine. It is, of course, as safe and as effective as it can be at the present time. However, we must not lose sight of the fact that some individuals, sometimes for unknown reasons, are not able to respond to the antipoliomyelitis vaccine, or to any other kind for that matter.

One important fact with respect to immunization against polio has perhaps been overlooked by many persons. This item is the protection the vaccine can give to persons who have already had the disease. A child, for example, who suffered a polio attack two years ago may have been infected with one type virus only—Type I, let us say. Thus, the antibodies his body produced at that time will protect him from any future attacks of this type. However, he may have no protection whatsoever against Types II and III. Therefore, the polio victim stands to gain in added immunity from the vaccine, almost if not as much as the polio-free individual.

Not long after the effectiveness of the Salk vaccine was announced, a popular magazine pointed out that one major, concurrent victory had been largely ignored in the excitement and rejoicing over the vaccine. The hard battle waged to develop a polio vaccine was called a major engage-

ment in man's war against those intractable enemies in the world of germs, the viruses. The vaccine discovery was, of course, important of itself. But it takes on even greater importance when another fact is considered. Just as Dr. Salk profited by the discoveries and work of those before him, so other scientists may profit from his work.

What has been Alabama's experience with Salk vaccine for protection against polio? The first chance to try it came in 1954, when Montgomery county was chosen one of approximately 200 areas in the nation to participate in the field trials—one of the largest tests ever given a vaccine. Thousands of children, or almost one-half of those in the first, second and third grades of Montgomery schools, were immunized with their parents' permission.

Then, in the spring of 1955, the National Foundation for Infantile Paralysis provided vaccine for a voluntary immunization program. Approximately 200,000 first and second grade school children were eligible to receive the vaccine, and at the end of the program, approximately three-fourths of them had received one or two vaccine injections each.

Late that same year, 1955, Alabama began participation in a federally financed program of vaccine distribution. Plans were made to distribute vaccine to county health departments, who in turn made available supplies to doctors in private practice.

As counties began receiving their first supplies of vaccine, health departments began holding clinics. At first, only children in the age group 5 through 9 were eligible to receive the vaccine. However, later, the age group was extended to include individuals aged six months through 14 years and expectant mothers. The plan set up to govern the program specified that vaccine given in health departments would be free. However, doctors, though they could not charge for the vaccine—which was made available to them at no cost—could charge the patient a fee for administering it.

Under the voluntary distribution plan, Alabama receives 2.11 per cent of the nation's vaccine during the period of short supply. This percentage is based on the state's estimated percentage of the nation's population under the age of 20 years.

How many individuals have benefited from the protection of the Salk vaccine?

The response of the people has been encouraging. Therefore, an exact figure on the number of persons immunized would be "out of date" almost before it was printed. However, by about the middle of February 1956, over a quarter of a million persons each had received one or more immunizations.

But even in 1956, a shortage of vaccine continued to be a problem. The available supply was not keeping up with the demand in Alabama or elsewhere. Thus, the vaccine on hand had to be reserved for the most susceptible age groups, or those eligible to receive it.

Undoubtedly, the vaccine shortage will be overcome within a few years. It is then that health agencies in this state and in others can attack poliomyelitis with programs designed to reduce the number of cases to the smallest number possible. In the meantime, we must be content with the knowledge that protection is being made available to those most in danger of contracting the disease.

Cleft Palate Correction Requires Teamwork—

A group of specialists working together can produce the best results in correcting a cleft palate or lip, according to an editorial in the March 17th Journal of the American Medical Association.

In addition to surgery, to correct the deformity itself, corrections of teeth, speech, or psychologic problems are sometimes necessary. A plastic surgeon working alone cannot be expected to know exactly when and what other corrections are needed, but a team working together assures that "the right thing is done by the right person at the right time," the editorial said.

The team should consist of the surgeon, a pediatrician, otorhinologist, pedodontist, orthodontist and dental prosthetist, psychologist, speech therapist, social worker, and nurse.

In the field of speech therapy alone, preventive work started early not only will remove the need for special treatment later, but will give better end-results, the editorial said.

Some degree of cleft lip and palate occurs in about one of 850 live births. Almost every conceivable cause, including heredity and dietary deficiency of the mother, has been suspected of producing the deformity, but in most cases with "scant evidence."

Surgeons differ as to the best time to perform the operation. Some advocate that it be done between the ages of four and six weeks; others at the age of one year, and others between the ages of 18 and 24 months.

"Because many factors are involved, no simple formula can be offered and the type of operation and time of its performance must be determined for each individual," the editorial said.

BUREAU OF LABORATORIES

Thomas S. Hosty, Ph.D., Director

BUREAU OF PREVENTABLE DISEASES

W. H. Y. Smith, M. D., Director

SPECIMENS EXAMINED

CURRENT MORBIDITY STATISTICS

December 1955		1955			
				Nov.	Dec.
				Dec.	E. E.*
Examinations for diphtheria bacilli and Vincent's	600	Typhoid and paratyphoid fever	3	1	3
Agglutination tests	496	Undulant fever	0	0	3
Typhoid cultures (blood, feces and urine)	444	Meningitis	7	5	7
Brucella cultures	8	Scarlet fever	76	68	71
Examinations for malaria	50	Whooping cough	79	70	78
Examinations for intestinal parasites	2,103	Diphtheria	44	84	28
Darkfield examinations	0	Tetanus	3	3	3
Serologic tests for syphilis (blood and spinal fluid)	24,025	Tuberculosis	166	193	185
Examinations for gonococci	1,093	Tularemia	0	1	0
Examinations for tubercle bacilli	2,914	Amebic dysentery	0	1	0
Examinations for Negri bodies	62	Malaria	0	0	3
Water examinations	1,604	Influenza	291	972	252
Milk and dairy products examinations	4,536	Smallpox	0	0	0
Miscellaneous examinations	237	Measles	22	50	103
Total	38,172	Poliomyelitis	6	12	9
		Encephalitis	1	0	0
		Chickenpox	47	288	204
		Typhus fever	2	1	2
		Mumps	91	170	47
		Cancer	503	502	338
		Pellagra	1	0	1
		Pneumonia	147	363	171
		Syphilis	163	136	669
		Chancroid	1	3	14
		Gonorrhea	375	351	317
		Rabies—Human cases	0	0	0
		Positive animal heads	18	26	0

January 1956					
				Dec.	Jan.
				Jan.	E. E.*
Examinations for diphtheria bacilli and Vincent's	227	Typhoid and paratyphoid fever	1	0	3
Agglutination tests	616	Undulant fever	0	0	2
Typhoid cultures (blood, feces and urine)	544	Meningitis	5	14	10
Brucella cultures	8	Scarlet fever	68	25	75
Examinations for malaria	52	Whooping cough	70	63	80
Examinations for intestinal parasites	2,763	Diphtheria	84	17	27
Darkfield examinations	5	Tetanus	3	1	2
Serologic tests for syphilis (blood and spinal fluid)	23,064	Tuberculosis	193	178	178
Examinations for gonococci	1,442	Tularemia	1	3	1
Examinations for tubercle bacilli	3,516	Amebic dysentery	1	0	1
Examinations for Negri bodies	94	Malaria	0	0	2
Water examinations	1,671	Influenza	972	1393	771
Milk and dairy products examinations	4,792	Smallpox	0	0	0
Miscellaneous examinations	431	Measles	50	99	213
Total	39,225	Poliomyelitis	12	2	6
		Encephalitis	0	7	0
		Chickenpox	288	296	275
		Typhus fever	1	0	4
		Mumps	170	406	135
		Cancer	502	416	343
		Pellagra	0	0	1
		Pneumonia	363	391	256
		Syphilis	136	120	440
		Chancroid	3	3	11
		Gonorrhea	351	377	423
		Rabies—Human cases	0	1	0
		Positive animal heads	26	31	0

As reported by physicians and including deaths not reported as cases.

*E. E.—The estimated expectancy represents the median incidence of the past nine years.

BUREAU OF VITAL STATISTICS

Ralph W. Roberts, M. S., Director

PROVISIONAL BIRTH AND DEATH STATISTICS, OCTOBER 1955, AND COMPARATIVE RATES

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During October 1955			Rates (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	7255	4590	2665	26.4	25.8	25.6
Deaths	2185	1334	851	7.9	7.7	7.2
Fetal deaths	160	76	84	21.6	22.0	24.3
Infant deaths—						
under one month	164	83	81	22.6	21.5	19.7
under one year	229	105	124	31.6	31.7	27.8
Cause of Death						
Tuberculosis, 001-019	31	15	16	11.3	11.4	14.1
Syphilis, 020-029	3	1	2	1.1	4.0	4.8
Dysentery, 045-048					0.7	1.1
Diphtheria, 055	3	2	1	1.1	0.4	
Whooping cough, 056	2		2	0.7	0.4	
Meningococcal						
infections, 057	1		1	0.4	1.8	0.4
Poliomyelitis, 080, 081	3	2	1	1.1	1.1	
Malignant neoplasms,						
140-205	266	188	78	96.7	98.1	88.0
Diabetes mellitus, 260	19	13	6	6.9	11.4	6.7
Pellagra, 281	4	3	1	1.4	1.5	0.7
Vascular lesions of						
central nervous sys-						
tem, 330-334	284	160	124	103.2	92.2	91.7
Rheumatic fever, 400-						
402	1		1	0.4	2.9	0.4
Diseases of the heart,						
410-443	701	458	243	254.7	256.9	223.6
Hypertension with						
heart disease, 440-						
443	149	64	85	54.1	48.9	50.9
Diseases of the						
arteries, 450-456	53	38	15	19.3	12.9	12.6
Influenza, 480-483	7	5	2	2.5	1.8	2.2
Pneumonia, all forms,						
490-493	53	25	28	19.3	20.2	18.2
Bronchitis, 500-502	7	7		2.5	1.1	0.7
Appendicitis, 550-553	3		3	1.1	0.7	1.9
Intestinal obstruction						
and hernia, 560, 561,						
570	9	6	3	3.3	5.5	5.9
Gastro-enteritis and						
colitis, under 2,						
571.0, 764	15	1	14	5.4	2.6	4.5
Cirrhosis of liver, 581	13	9	4	4.7	5.9	5.2
Diseases of pregnancy						
and childbirth, 640-						
689	7	3	4	9.4	13.9	12.7
Congenital malforma-						
tions, 750-759	34	26	8	4.7	3.3	5.4
Accidents, total, 800-						
962	187	131	56	68.0	49.2	52.0
Motor vehicle acci-						
dents, 810-835, 960	98	70	28	35.6	25.4	26.7
All other defined						
causes	377	206	171	137.0	142.2	140.1
Ill-defined and un-						
known causes, 780-						
793, 795	102	35	67	37.1	29.8	30.8

PROVISIONAL BIRTH AND DEATH STATISTICS, AND COMPARATIVE DATA, FOR NOVEMBER 1955

Live Births, Fetal Deaths, Infant Deaths, and Deaths by Cause	Number Registered During November 1955			Rates (Annual Basis)		
	Total	White	Colored	1955	1954	1953
Live births	6840	4335	2505	25.7	27.9	25.4
Deaths	2192	1355	837	8.2	8.6	8.2
Fetal deaths	138	67	71	19.8	19.6	22.9
Infant deaths—						
under one month	146	81	65	21.3	23.2	21.7
under one year	213	112	101	31.1	33.9	34.5
Cause of Death						
Tuberculosis, 001-019	16	6	10	6.0	9.9	10.4
Syphilis, 020-029	7	1	6	2.6	2.3	2.3
Dysentery, 045-048	2	1	1	0.7	0.4	
Diphtheria, 055	7	1	6	2.6	0.4	
Whooping cough, 056	1		1	0.4	0.4	0.4
Meningococcal						
infections, 057						1.5
Poliomyelitis, 080, 081					0.8	0.4
Measles, 085					0.4	
Malignant neoplasms,						
140-205	289	200	89	108.5	92.3	104.0
Diabetes mellitus, 260	26	16	10	9.8	9.5	15.3
Pellagra, 281					0.8	0.8
Vascular lesions of						
central nervous sys-						
tem, 330-334	293	166	127	110.0	101.4	118.6
Rheumatic fever, 400-						
402	2	2		0.7	2.7	1.5
Diseases of the heart,						
410-443	689	468	221	258.7	296.9	267.4
Hypertension with						
heart disease, 440-						
443	142	63	79	53.3	61.1	60.6
Diseases of the						
arteries, 450-456	41	31	10	15.4	16.7	9.6
Influenza, 480-483	7	4	3	2.6	5.3	8.1
Pneumonia, all forms,						
490-493	78	39	39	29.3	30.0	38.8
Bronchitis, 500-502	1	1		0.4	1.1	3.4
Appendicitis, 550-553	2	1	1	0.7	0.8	1.5
Intestinal obstruction						
and hernia, 560, 561,						
570	17	9	8	6.4	8.4	5.0
Gastro-enteritis and						
colitis, under 2,						
571.0, 764	6	2	4	2.2	2.7	5.0
Cirrhosis of liver, 581	10	7	3	3.7	8.0	6.9
Diseases of pregnancy						
and childbirth, 640-						
689	7	4	3	10.0	5.3	3.0
Congenital malforma-						
tions, 750-759	30	21	9	4.4	2.5	4.5
Accidents, total, 800-						
962	173	109	64	65.0	60.7	71.8
Motor vehicle acci-						
dents, 810-835, 960	75	48	27	28.2	24.3	33.0
All other defined						
causes	402	238	164	151.0	168.7	150.4
Ill-defined and un-						
known causes, 780-						
793, 795	86	28	58	32.3	35.7	41.4

*Rates: Birth and death—per 1,000 population;
Infant deaths—per 1,000 live births; Fetal
deaths—per 1,000 deliveries; Maternal deaths

—per 10,000 deliveries; Deaths from specified
causes—per 100,000 population.

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CLINICAL USES OF ADRENAL CORTICAL STEROIDS

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The clinical use of an adrenal cortical steroid, Kendall's Compound E, was first reported on in 1949 by Hench, Kendall, Slocumb and Polley.¹ The striking improvement observed in their cases of rheumatoid arthritis following an exogenous increase of this substance doubtlessly is recalled by each of you. Shortly, Thorn and his associates² reported on the response in certain clinical disorders following an endogenous increase in adrenal cortical steroids stimulated by parenteral administration of adrenocorticotrophic hormone.

Following this initial impact, the practicing profession was repeatedly staggered; first, by an announcement of the "Compound of the Year," and later, the "Compound of the Month." Each source of commercial supply seemed to have the "Product of the Day" available as a pill, an ointment, in a "poof" bottle, a dropper bottle, or for parenteral injection.

Rarely has a medicinal therapy been utilized in such a wide variety of disorders. Early, there was widespread bustle among the members of our profession to be the first to determine the effect of ACTH or the

adrenal steroid "Du Jour" on one of the many human illnesses which had resisted successfully all previously employed therapeutic agents. Early reports seemed often to interpret clinical response to these potent substances as a cure for one disorder or another.

More than a year has passed since Bunim and his associates³ reported on the clinical use of Metacortandralone and Metacortandracin. In this period of relative calm we have been given time to, in some measure, reason our way out of a state of bewilderment. It appears from a study in December 1955⁴ that because of certain physiologic and metabolic effects we need not be troubled at the moment by the appearance on the scene of the latest synthetic steroid, delta 1, 9 alphafluorhydrocortisone (D-1-FF).

Arising from the chaos of early clinical use of ACTH and the adrenal cortical steroids, a few concepts now have taken form but the shapes are not unalterable.

Most important of all, man has been given perhaps the best set of investigative tools of medical record. The role of these complex substances in experimentation and clinical investigation is not within the scope of this presentation.

Paramount to the members of our profession in practice is the necessity of realizing that in present methods of clinical utilization these agents have not been responsible

Read before the Birmingham Academy of Medicine, Birmingham, Alabama, Jan. 18, 1956.

1. Hench, P. S.; Kendall, E. C.; Slocumb, C. H., and Polley, H. F.: The Effect of the Adrenal Cortex (17-Hydroxy-11-Dehydrocorticosterone: Compound E) and of Pituitary Adrenocorticotrophic Hormone on Rheumatoid Arthritis, Proc. Staff Meet., Mayo Clinic 24: 181, 1949.

2. Thorn, G. W.; Forsham, Peter H.; Frawley, Thos. F.; Hill, S. Richardson, Jr.; Roche, Marcel; Staehelin, Dietrich, and Wilson, D. Laurence: Clinical Usefulness of ACTH and Cortisone, New England J. Med. 242: 783-793, 824-834, and 865-872, 1950.

3. Bunim, J. J.; Pechet, M. M., and Bollett, A. J.: Studies on Metacortandralone and Metacortandracin in Rheumatoid Arthritis, J. A. M. A. 157: 311, 1955.

4. Bunim, J. J.: Personal communication.

for cure, in the true sense of the word, of a single disorder. This is not to deny that their use may be lifesaving in certain situations.

As regards clinical usage, the basic and not to be forgotten concept is that these compounds are potent hormones to which the body must respond in accordance with the laws of endocrinology. In situations of endogenous deficit one may expect a dramatic response to exogenous supply, consistent with the normal metabolic requirement, totally analogous to that observed in a case of diabetes mellitus when supplied with exogenous insulin, and the quickening apparent in the slothful patient with myxedema following administration of thyroid extract. Conversely, when these compounds are administered in the absence of intrinsic deficit, one must expect characteristic evidences of excess analogous to the respective specific physiologic responses which result when individuals with sufficient endogenous supply are given insulin or thyroid extract.

In reports on the use of adrenal cortical steroids in the management of disorders in which there is no endogenous deficit, it has been disturbing to note the readily predictable physiologic and metabolic responses referred to as "undesirable side effects." "Undesirable," yes; but "side effects," no. The animal must respond to the excess of hormone in a fashion which, though varying in degree, is of constant pattern. Remember how the normal tadpole overgrows after ingesting bits of thyroid extract tossed into his bowl.

Familiarity with the various spheres of body influence is necessary for proper utilization of the adrenal cortical steroids in clinical medicine. One should be ever cognizant of the high order of their position in the vastly complicated chain of action required to maintain homeostasis and of the turmoil wrought therein by lack or overabundance of supply. If one considers the adrenal steroids in the light of their rather widespread exertions, together with known, but not always understood, effects on certain human disorders, a useful clinical tool is provided.

May we consider application of some known effects of these compounds in the management of certain disease states?

These steroids serve admirably as sub-

stitute agents in cases of adrenal cortical insufficiency from intrinsic disease or surgical removal.

Intramuscular administration of Compound E, or preferably the intravenous administration of Compound F or aqueous solution of whole cortical extract, may save the life of a patient in whom there is a break in the complex ring termed the Stress Response. Every physician should be familiar with situations and drugs that hinder or block the response of the body to acute stress. At the risk of boring you with repetition certain ones will be briefly considered.

Acute Blood Loss: In this circumstance the stress response is inoperable until the loss is at least partially restored. One may consider many possible explanations for failure of response at a time when so critically needed but it would be interesting to know the exact answer.

Barbiturate Administration: The stress response is blocked to a varying degree in patients with a fairly high barbiturate blood level. This is presumed due to the suppressive action of this group of drugs on the hypothalamus.

Administration of Testosterone: Currently this substance is frequently prescribed for a variety of conditions. The response to stress may be inadequate in patients so treated. The ring is broken here by the inhibitory action of Testosterone on the adeno-hypophysis.

Spinal Anesthetic: Agents utilized for spinal anesthesia block the stress response by interrupting afferent pathways to higher centers.

Intrinsic Deficiency of Adrenal Cortical Steroids: The response to stress is inadequate when insufficient supply results from disease or absence of the adrenal cortex, or lack of adrenocorticotrophic hormone from intrinsic disease of the adeno-hypophysis, or suppression of its function as a result of exogenous excess of adrenal cortical steroids.

Armed with this information and a good index of suspicion, a look at the patient and an estimation of the total eosinophile count should allow us, on occasion, to prevent a death.

A known effect of increase in adrenal cortical steroid level is suppression of production of adrenocorticotrophic hormone. This

action finds clinical application in the management of cases of the adrenogenital syndrome due to hyperplasia of the adrenal cortical mass and in suppressing growth in metastatic carcinoma.

One complicated effect fairly commonly shared by the various adrenal cortical steroids is an antiphlogistic or anti-inflammatory action. This facet is often referred to in the literature as an antirheumatic property. The latter term is confusing, and no more proper, it would seem, than some such connotation as "anti-iritis." While it is true that certain of the adrenal steroids suppress the inflammatory response in some of the rheumatic disorders, thereby diminishing pain and disability, the natural course of the particular disease continues. This is evidenced by prompt recurrence of symptoms on withdrawal of medication prior to that strange and natural phenomenon known as a remission.

This antiphlogistic property was responsible for the clinical trial of adrenal steroids in that interesting collection of disorders known as the collagen diseases.

Results have been especially disappointing in cases of scleroderma and dermatomyositis. I am unaware of any studies thus far to ascertain why the "magic potion" fails to alter significantly the course of these two conditions.

In acute rheumatic fever it appears that the anti-inflammatory effect often is sufficient to prevent progress to the point of valvular crippling, and a natural remission supervenes. Perhaps the neurologists can tell us why these agents fail to suppress manifestations of chorea. The use of hormone therapy is important, once a diagnosis of acute rheumatic fever has been established, but it seems more important to emphasize continued study and effort in the preventive field.

Although extra anti-inflammatory effects are not as great with use of prednisone (Meticorten) as previously employed complexes, it appears wise in rheumatoid arthritis to limit this form of therapy to fulminating cases and those in need of mobilization as a result of pain or early joint contracture. In such instances a fairly brief period of therapy usually will suffice. The older plans of management remain superior in terms of long range effectiveness. The much publicized combination of aspirin and

prednisone in a single tablet, while appealing to the public, has not impressed us favorably or altered our attitude in respect to the use of adrenal cortical steroid in cases of rheumatoid arthritis.

Life is being prolonged in cases of disseminated lupus erythematosus by use of the adrenal cortical steroids. In our experience rarely has it been possible to withdraw medication in subacute or acute lupus without prompt exacerbation of symptoms, frequently more violent than observed prior to initiation of therapy. We have been too prone to pelt with steroid pills those patients exhibiting "LE" cells unaccompanied by systemic manifestations of acute disseminated lupus erythematosus. Regardless of the duration of therapy, experience to date indicates that little alteration of the laboratory phenomena of DLE is to be anticipated. The rather remarkable suppressing effect of prednisone in small doses may permit observation of cases for much longer periods than previously possible. Under such circumstance one may hope for remission of laboratory as well as physical manifestations of the disease.

The antiphlogistic effect of certain adrenal cortical compounds is especially pronounced in cases of polyarteritis nodosa, a condition not so prone to recurrences. Apparently, the lesions rapidly heal while the violent tissue reaction is pinned down by action of the cortical components. This type of therapy is hazardous in cases with widespread visceral involvement. Prompt scarring takes place just as rapidly as in cases with less diffuse lesions. Thus, the paradoxical end result may be a patient who, though dead, has scarred away his disease. Patients with extensive visceral lesions of polyarteritis nodosa are known to have recovered before the days of clinical use of adrenal cortical compounds. In such a situation, nature, sans accouchement, probably offers the patient the best chance of survival. Masterful withholding here should not be damned as therapeutic nihilism but praised as clinical wisdom.

The antiphlogistic effect of certain adrenal cortical steroids has been employed with good results by ophthalmologists. Inflammatory disorders due to various forms of trauma respond brilliantly to the installation of ophthalmic preparations. The acute reactions of iritis, iridocyclitis, keratitis and the like rapidly yield to these anti-inflam-

matory agents. Choroiditis, chorioretinitis, retinitis pigmentosa, and optic neuritis may improve on long-term systemic administration.

These compounds may suppress the manifestations of certain skin disorders. However, those characterized by remission and relapse, such as psoriasis, may promptly reappear on withdrawal of medication. It is of interest that some skin disorders appear to respond more satisfactorily to adrenocorticotrophic hormone than to any single adrenal cortical compound, suggesting that the most effective agent has not been employed, or that multiple compounds are more effective than any one alone.

The anti-inflammatory effect of these steroids has resulted in their use in cases of chronic thrombo-ulcerative colitis. Remissions may be induced but here again relapses are the rule when the medication is withdrawn. In addition to discouraging inflammatory response, there is also a blocking of the increased lysozyme activity so characteristic in this disease.

The response in cases of nonspecific thyroiditis is dramatic. In our experience, treatment for a relatively brief period has sufficed. Occasionally, exacerbations following withdrawal dictate an additional period of therapy. There is little enough known about the process of thyroiditis for one to have firm convictions concerning the particular adrenal cortical steroid effect or effects responsible for relief of symptoms. One might hazard a guess that it is a combination of the anti-inflammatory and lymphoid suppressing effects.

These agents have been reported of value in certain acute neurologic disorders such as Bell's palsy and infectious neuronitis. Evidently the antiphlogistic action is greater below the higher neurologic levels. Our results with their use in a few instances of each have not been impressive, with the possible exception of one case of infectious neuronitis.

The anti-inflammatory effect of the complexes has been reported to be helpful in cases of cerebral thrombosis and acute thrombophlebitis, if employed early. The unpredictability in cases of cerebral thrombosis has made it impossible for us to appreciate the outstanding response in the relatively few cases in which we have pre-

scribed this treatment. Our experience with use of the corticosteroids in cases of acute thrombophlebitis has been too limited to form an opinion. Subjective and objective manifestations are reported to subside more promptly than naturally anticipated. The period of treatment required is sufficiently brief to fear greatly the induction of venous inflammatory reaction at new sites.

In certain rheumatic conditions the anti-rheumatic effect of the adrenal steroids has local application. Intra-articular injection of hydrocortisone (Compound F) generally reduces inflammatory manifestations and is a particularly useful adjunct in cases where large joints are involved. However, symptoms tend to recur from several days to three weeks after intra-articular therapy. In our experience the most gratifying and lasting results have been obtained in local administration of hydrocortisone in cases of acute bursitis.

In a fashion somewhat similar, perhaps, to that in which the adrenal steroid compounds block inflammatory response to various noxious agents, the usual mechanism of an allergic reaction is modified. Thus, these complexes are particularly useful in controlling symptoms in patients afflicted with self-limiting hyperergic states such as drug sensitivity and serum sickness. The acute effects of recurring allergic disorders often may not only be brought under control but the particular state may then be susceptible to more conservative forms of treatment.

None can deny usual good effect when adrenal cortical compounds are used in certain situations resulting from a metabolic fault, examples being gout and the nephrotic syndrome. In neither instance is the particular effect clearly understood. Administration of the complexes will promptly relieve symptoms and signs of acute articular gout, but renewed joint activity shortly becomes evident unless withdrawal is followed by the administration of colchicine or salicylates for two weeks or more. This propensity for acute joint symptoms to occur following withdrawal lends itself well to use as a provocative test in patients suspected of having gout. There is no need to comment on the results of use of these materials in cases of the nephrotic syndrome. Especially in children is an excellent result to be expected.

Certain hematologic disorders may be benefited. The anemia of rheumatoid arthritis, generally refractory to other measures, responds almost invariably to administration of adrenal cortical compounds, only to reappear on cessation of treatment. They may be useful in the acute crises and in preoperative preparation of patients with thrombocytopenic purpura or congenital hemolytic anemia, and constitute the treatment of choice in acquired hemolytic anemia. The mechanism by which these compounds exert favorable effect in certain blood dyscrasias has not been clarified. However, suppression of lymphoid activity probably explains the remission in cases of acute leukemia.

In cases of acute hepatitis of viral etiology, use of the steroids is followed by rather prompt clearing of jaundice. However, after withdrawal, recurrence of jaundice is the rule and generally will recur even if treatment is continued. Use of these agents probably should be limited to those patients profoundly ill with acute infectious hepatitis.

We have been loath to follow those crying for use of these compounds in acute infec-

tious states. There is much to be learned concerning their effect on the immune processes of the body. Until careful experimental work indicates a different path we shall content ourselves with their use in those cases in which an estimation of the total eosinophile count suggests exhaustion, or some other fault, which has rendered an individual incapable of adequate response to the stressful situation of acute infection.

CONCLUSIONS

The diverse effects of the adrenal cortical steroids on the animal mechanism may be utilized to advantage in the management of a wide variety of human illnesses.

With present methods and doses employed, their chief value appears to lie in support of the patient with acute or chronic endogenous lack of these complexes, and in modifying the natural response in those afflicted by certain derangements, largely of endogenous origin. Rarely, if ever, are they agents of cure, in the true sense of the word.

The desire to induce one of the specific effects of the adrenal cortical steroids in a given disease state should be tempered by an understanding of the exertions which will be reflected on the total organism.

THE DIRECT APPROACH TO SHADOW AND SUBSTANCE

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Many cases of lung cancer have been cured by the application of surgery. The lives of many more have been prolonged and made more comfortable by surgical, radiological, or chemical methods of palliation. Five and ten-year survivors are being added constantly to the community of useful and grateful citizens. However, these efforts and dividends are greatly overshadowed by the immensity of the total problem.

Today, cancer of the lung is one of the chief causes of death and the number one killer by cancer among men. Its precipitous rise is almost as frightening as the traffic death toll and, numerically, it is not lagging far behind. The tragedy, family-wise, is deepened because adult wage earners in the 40-60 age bracket comprise the

overwhelming number of victims. Predictors have cancer of the lung decimating the adult male population by 1970 unless our present way of life changes.

THE PROBLEM IS UNIQUE AND CHALLENGING

The precipitous rise in the attack rate is not the only unusual feature of this particular cancer. Its location is in a vital organ that is in constant motion, the breathing act being repeated 16-20 times per minute when at rest. A cancer of the lung is centrally placed and about as near dead center of the body as any internal cancer can be. There are no pain fibers in the tissues within the lung which first undergo malignant change. The function of the organ is not disturbed to a discernible degree at its inception. Therefore, the cancer may exist in a "silent" form for considerable periods of time. This means that warning signs at curable stages are usually absent. Further-

more, verifying tests, such as bronchoscopic biopsy and cytologic study of secretions from the bronchial system, have a low yield in early, localized cancer. All these unique features would seem to mitigate against early discovery and would add to difficulties to easy access and cure of the disease.

Fortunately, there are other factors which offset the bad features which are stacked against the lung cancer victim. Silent cancers cast abnormal shadows fluoroscopically or in screening films. From the standpoint of detection in early and presymptomatic periods, cancer in this site becomes the most favorable of all internal growths. The time schedule for treatment can be set ahead months or even years as compared to other internal cancers.

The over-abundance of pulmonary tissue permits a loss of more than half of the total and leaves an adequate reserve for ordinary activity. Also, the lung is divided into small, distinct, anatomic units which can be detached individually or in groups. There are 18 segments, each one of which is comprised of two or more subsegments. There are over 36 separate surgical compartments. Each one of these small units lends itself to dissection and enucleation without disturbance of the function of adjoining segments. This means that total biopsy of localized lesions can be accomplished without significant loss of functionable pulmonary tissue. An accurate determination of the substance that has produced the abnormal shadow in the x-ray can, therefore, be made safely and conservatively.

APPREHENSION

Within the 23-year period during which surgical excision of the cancer-bearing lung has brought new hope to victims of this disease, much has been learned about its latent period, verification and treatment. Also, much has been learned about paucity of symptoms and signs or, if present, their confusing nature. More is known of the vagrancies of the clinical course of the disease. The masquerading tendencies of lung cancer are less apt to mislead the doctor now as compared to a decade ago. Also, false negative bronchoscopic or sputum study reports are less likely to lull the physician into a false sense of security.

In fact, the approach to cancer of the lung has been greatly simplified. The discovery of an unexplained shadow in an x-ray of

the chest of a patient, with or without symptoms or abnormal physical signs, is now recognized as the first clue to the possible existence of a cancer. Other tests may or may not be positive. If there is a bonafide area of abnormal density within the lung as determined by simple x-ray and if there is no absolute contraindication to surgery, the issue will have to be settled by the direct approach to the substance which produced the shadow—surgical exploration and total biopsy.

In a recent study of over 50 patients who were 5-year cures of cancer of the lung, a search was made for universal features which existed in these fortunate individuals. The only common denominators found in every case were:

1. An abnormal shadow had been discovered on an x-ray film.
2. An exploration had permitted verification by examination of the lesion which had produced the abnormal shadow.
3. Treatment consisted of an excision of the cancer-bearing lobe or lung and regional lymphatics.

RESPONSIBILITY OF THE CHEST SURGEON

The general practitioner, diagnostician and radiologist must screen their patient population for the first clue. The responsibility then passes quickly to the surgeon who must prove or disprove the presence of cancer and remove it if cure is to be the goal. This means surgical exploration, total biopsy and possibly resection of segments, lobe or lung. The procedure must be decisive, safe and conservative. The risk of exploration has been reduced to a fraction of 1 per cent. This figure must be well below the cancer potential of the abnormal shadow in the unverified case.

Technical details which have been factors in minimizing risk and in giving greater assurance of solving the problem include:

1. A wide and ample exposure to facilitate intrathoracic dissection.
2. Avoidance of traction on lung, hilar or mediastinal structures.
3. Gentle manipulation of all tissues.
4. Limitation of the resection to the smallest unit (segment or subsegment) which will permit complete excision of the lesion unless there has been preoperative verification of the lesion histologically.

5. In the event of proven cancer, complete resection of lobe or lung with regional lymphatics.

6. Testing of the bronchial stump or segmental surfaces for air leak.

7. A check on the ability of the remaining lung tissue to fill the hemithorax if the resection was less than a total one.

8. Reestablishment of the integrity of the rib cage by some form of rib approximation and fixation in their original position.

9. Making certain the underlying lung is reexpanded at the time the chest wall is closed.

10. Providing double drainage for underwater seal.

11. Institution of early ambulation and exercise of shoulder and thoracic muscles.

The total period of hospitalization rarely exceeds a two-week period. An additional 2-4 week convalescent period usually suffices. This is a small price to pay for cure in the event of cancer or for the elimination of some other lung abnormality, many of which cause serious ill health at some time in their life history.

TABLE 1
PRIMARY CARCINOMA OF THE LUNG
1932-June 1955

Total	1486
Verified	1261
Explored	60%
Resected	37%

CA. LUNG SURVIVAL
JUNE 1932-OCT. 1950

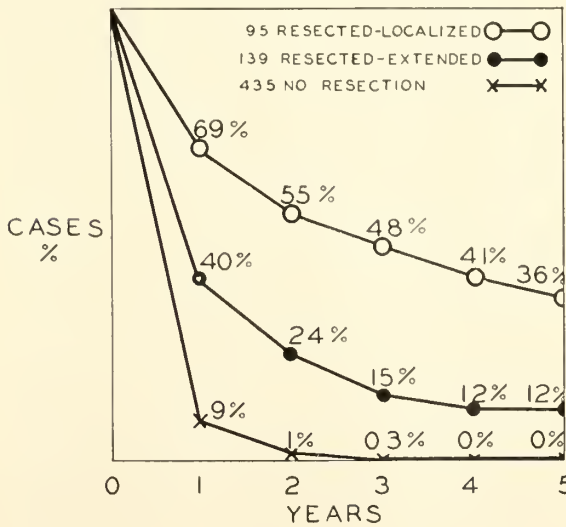


Fig. 1

RESULTS

In our Clinic, 1486 patients with cancer of the lung have been studied in the past 23 years (Table I). Recently, an analysis of 669 consecutive patients seen between 1932 and 1950 has been made (Fig. 1). These can serve as a basis for survival studies. In the accompanying table, cases were divided into three categories:

Group 1—Curative resections. (Patients with localized cancer and, therefore, having a reasonable expectation for cure.)

Group 2—Palliative resections. (Patients with known cancer which had spread beyond the lung and a hope for cure only if the extension of the process can be excised with the cancer-bearing pulmonary tissue.)

Group 3—Not explored or not resected.

Within recent years, patients have been referred for surgery more promptly. The percentage of localized cancers has increased. When survival studies of this group can be made, a salvage of over 50 per cent is predicted.



Fig. 2—Miss H. C. Age 66. Teacher.

School survey film showing silent shadow left mid-lung field. Upon exploration, a localized adenocarcinoma, 4 cm. in diameter, was found and treated by pneumonectomy. The patient remained well and free of metastatic disease until 72 years of age when she died of other causes.

OTHER FORMS OF THERAPY

Unfortunately, we have not observed a significant prolongation of life in patients



Fig. 3—Mr. J. S. Age 49. Business man.

Survey film done by company in May 1949. Note area of density above diaphragm on right. Exploration was delayed until December 1951, when shadow was a trifle larger. A bronchiolar carcinoma was found and was treated by lobectomy. The patient ultimately succumbed to metastatic cancer in June 1954.

treated by either super-voltage radiation, chemotherapy, or by a combination of both.* In fact, patients so treated will average out about one month longer as to survival than the untreated cases.

At present, these palliative methods seem justified when surgical excision is contraindicated in only three situations:

1. Highly anaplastic lesions with distressing symptoms.
2. When there is severe pain from metastatic disease.
3. When superior vena caval obstruction causes distressing symptoms.

CAN INDIVIDUALS REDUCE THEIR CHANCES OF DEVELOPING LUNG CANCER?

There are facts which cannot be easily brushed aside. The attack rate of cancer of the lung is over 10 times as great in cigarette smokers as compared to non-smokers. Precancerous lesions (bronchial metaplasia) and carcinoma in situ have been found in serial sections of the lungs of cigarette smokers who die of other causes and come to postmortem examination. Distillations

*There is no 5-year cure recorded in our experience except those treated by surgical excision.

from cigarette smoke contain substances which are carcinogenic to the skin of cancer strain mice. These facts can be considered as circumstantial evidence linking the substances in the smoke of cigarettes to the development of pulmonary cancer. Smokers, the tobacco interests, and all of us want more absolute evidence. This will undoubtedly come with time. However, the lives of thousands of people are at stake right now. It would seem sensible to recognize the circumstantial evidence for the present and consider the hazards involved. Risks should be balanced against the sum total of the smoking pleasure. Each individual should decide for himself. Doctors are looked up to as guardians of the public health. They should wisely advise their friends and patients as to the risks of smoking. They can best carry out their mission by setting a good example and curing their own addiction.

"Alcohol Pain" Is Symptom of Hodgkin's Disease—Pain following a drink of beer or other alcohol now has been added to the thousands of unusual telltale signs which help doctors to diagnose diseases.

Three Minnesota doctors have reported that four patients with Hodgkin's disease suffered severe pain in the arms, chest, neck, shoulder, or low back within five minutes after taking any kind of alcoholic drink.

The report by Drs. John O. Godden, O. Theron Clagett, and Howard A. Andersen of the Mayo Clinic and Foundation, Rochester, was made in the April 14 Journal of the American Medical Association.

Hodgkin's disease is a normally painless but progressive enlargement of the lymph nodes, spleen, and general lymphoid tissue, which often begins in the neck and spreads over the body.

The doctors said in their four patients the pain appeared almost immediately after a few swallows of alcohol. Neither the type of drink nor the amount consumed influenced the pain. The patients described it as "paralyzing," "dragging," and "an achy numb feeling." The pain lasted from 15 or 20 minutes to three hours in the various patients.

The doctors noted at least 15 other reports of pain among Hodgkin's disease patients following the drinking of alcohol. The cause of the pain is unknown, but it often appears in regions known to be affected by the disease.

They said they agreed with other physicians who feel that "alcohol pain" is one good test for persons suspected of having Hodgkin's disease, and for detecting recurrences among treated patients. It also could be used to evaluate results of treatment.

EVALUATION AND MANAGEMENT OF CARDIAC PATIENTS FOR SURGERY

WM. J. ATKINSON, JR., M. D.
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Preoperative Evaluation

With ever increasing numbers of persons in the older age groups, the problem of heart disease in patients needing surgery is steadily growing greater. With this is an increased need for a careful preoperative evaluation of the cardiovascular status of these patients. Not only do older people have more heart disease but the types of heart disease which are more likely to react poorly to surgery are more frequently seen in the older age groups. A recent author has pointed out that "the incidence of coronary atherosclerosis in patients beyond 60 years of age is sufficiently high so that, for all practical purposes, all patients beyond 60 should be dealt with as though they had coronary atherosclerosis."

However, most heart disease is certainly not a contraindication to surgery. It has long been noted that most patients with heart disease tolerate surgery surprisingly well.

In the majority of cases good cardiac functional capacity is the single most important requirement for successfully surviving surgery, although there are occasional cases where this may not indicate accurately the status of the heart. Questions regarding

the patient's exercise tolerance are certainly an important part of the preoperative evaluation and should always be included in the history (Chart 1). Unfortunately, in these days of ranch houses, elevators, and automobiles, a satisfactory history in this regard is not always obtainable.

In general, a cardiac lesion which permits reasonably normal, though somewhat restricted, activities does not substantially increase the surgical mortality. On the other hand any type of heart disease which has placed a severe strain on the heart and caused serious compromise of the circulation will definitely increase the surgical risk. If this has progressed to the point of frank cardiac failure, then surgery should always be delayed, if possible, until compensation can be accomplished. In emergencies this can be done by rapid intravenous digitalization and mercurial diuretics. Oubain will digitalize most patients in 2-4 hours, and Cedilanid will take 8-12 hours.

Even most patients with coronary disease tolerate major operations well. One large series of major operations on selected patients with severe coronary artery disease reports a mortality of only 4%. On the other hand, recent or impending myocardial infarction certainly imposes a very great risk, and all surgery should wait 3 months or longer if possible. In an emergency, the minimal procedure which can be done is the best. It is safer to treat the onset, or any marked increase in angina pectoris, as a possible coronary occlusion, even when other evidence is lacking.

This brings up the sometimes difficult problem of diagnosis of recent atypical myocardial infarction. Most of us are familiar with those where the pain and clinical picture are not accompanied by diagnostic EKG changes. Less familiar are those cases of painless infarction which represent about 4% of all myocardial infarctions. Their presenting symptom is most often dyspnea, but occasionally vertigo, syncope, nausea, and vomiting manifest themselves.

An additional 6% of myocardial infarctions have minor symptoms of discomfort

CHART I PREOPERATIVE EVALUATION

- I. Cardiac history.
 - a) Previous diagnosis of heart disease, hypertension, or rheumatic fever.
 - b) Pain or dyspnea on exertion, and how much exertion.
 - c) Edema.
 - d) Orthopnea; paroxysmal nocturnal dyspnea or pain.
 - e) Palpation, and paroxysmal arrhythmias.
- II. Careful physical examination.
- III. EKG and chest x-ray—especially patients over 45.
 - a) Help determine presence and extent of heart disease.
 - b) Serve as a baseline in case of operative or postoperative complications.
- IV. CBC, urine, blood sugar, B. U. N.

Presented at the annual meeting of the Alabama Chapter of the American College of Surgeons, Point Clear, Jan. 13, 1956.

rather than pain, and could be easily misinterpreted or missed entirely. Their symptoms may be sensations of "pins and needles" subternally, tightness, or pressure in the chest or epigastrium, choking sensations, or just vague uneasy sensations. Bizarre types of pain, which might not suggest coronary disease, add even further to the group where the diagnosis can be missed. These patients may have pains in the neck, jaw, back of the chest, or abdomen.

Because of some of these difficulties, it is felt that an EKG and chest x-ray are important parts of the preoperative evaluation, and should be done especially on all patients 45 years or older who are about to be submitted to a major surgical procedure. Even when normal, these may later be of great value for comparison in case of operative or postoperative complications.

There are several types of heart disease which are especially likely to increase the operative mortality rate (Chart II). The first two of these have already been men-

CHART II

CONTRAINDICATIONS TO ELECTIVE SURGERY

- I. Poor risk cases.
 - a) Recent or impending myocardial infarction.
 - b) Cardiac decompensation.
 - c) Active myocarditis or pericarditis.
 - d) Bacterial endocarditis.
 - e) Severe aortic stenosis (dizziness, syncope attacks, or angina pectoris.)
 - f) Acute rapid paroxysmal arrhythmias.
- II. Increased risk cases.
 - a) AV heart block—may need special preoperative and operative treatment.
 - b) Angina pectoris.
 - c) Previous myocardial infarction.
 - d) Moderate degree of aortic stenosis.
 - e) Cases with marked limitation of activities.
 - f) Certain chronic arrhythmias.

tioned. Active involvement of the myocardium or pericardium, whether it is due to rheumatic fever or some other cause, should be allowed to subside before an operation is undertaken.

Bacterial endocarditis is such a serious disease itself that no elective surgical procedure should be considered until it is controlled.

Patients with severe aortic stenosis are susceptible to sudden death, and this danger is increased by general anesthesia and

surgical procedures. The risk is greatest in those patients who have experienced dizziness, syncope, or angina pectoris. There is no good way of preventing this complication and their relatives should always be warned in advance.

Rapid paroxysmal arrhythmias, such as auricular and nodal tachycardias, auricular fibrillation, and auricular flutter, impair the efficiency of the heart and predispose the patient to shock and heart failure. Ventricular arrhythmias also predispose to ventricular fibrillation. These arrhythmias must be abolished or controlled before surgery.

The EKG may be the only indication of a partial AV heart block, and all degrees of AV block predispose the patient to Adams-Stokes attacks. Attacks of ventricular asystole associated with this syndrome may often be avoided by the administration of ephedrine or Isuprel at regular intervals. This condition will certainly increase the operative risk, as will the other conditions listed in Chart II—angina, previous infarction, moderate aortic stenosis, markedly decreased functional capacity, and some types of chronic arrhythmias.

In acute surgical emergencies, of course, one may be forced to ignore the cardiac contraindications. Even in such desperate situations it is usually possible to lessen the risk by use of the proper cardiac drugs and paying careful attention not to exceed the patient's tolerance for intravenous fluids.

Preoperative Preparation and Medication

Any anemia should be corrected since this always places an added strain upon the heart. If there is any danger of congestive failure, sodium should be restricted in the preoperative period, and sodium-containing fluids should not be given during or after the operation except to replace that which is lost—no more.

Routine preoperative digitalization is probably unwise because of its tendency to increase the incidence of arrhythmias, and because it decreases the efficiency of the compensated heart. This does not mean that it should not be given if there is the slightest evidence of congestive failure or even of a marked decrease in cardiac reserve.

The general rule in preoperative sedation is to use slightly smaller doses for cardiac

patients in order to prevent any possible respiratory depression and hypoxia.

If there is a history of paroxysmal auricular fibrillation or flutter, quinidine should be given before the operation. If there are frequent ventricular premature systoles, quinidine or Pronestyl may be used to decrease these. It must be kept in mind, however, that these drugs will increase the difficulty in initiating the heart beat if ventricular standstill occurs during the operation.

Anesthesia

It is an often stated rule that the skill of the anesthetist is more important than the type of anesthesia. However, other things being equal the best anesthesia for cardiac patients is ether in a closed system with a high percentage of oxygen, combined with nitrous oxide and/or Pentothal induction.

In general, spinal anesthesia is to be avoided because any fluctuations in the blood pressure are tolerated poorly by the damaged heart, and because of the increased incidence of venous thrombus formation in the legs. The exception to this is an occasional patient who must be operated on while still in congestive failure. Here, inhalation anesthesia may be undesirable, and carefully controlled spinal may even be of some benefit by decreasing the venous pressure. The spinal is best combined with a vasoconstrictor, 100% oxygen inhalation, and small amounts of Sodium Pentothal.

The risk of anesthesia to the damaged heart is primarily due to the danger of hypoxia, carbon dioxide retention, sharp changes in blood pressure, cardiac reflexes, and myocardial depression due to excessive anesthesia.

During Operation

During the operation a *fall in blood pressure and increase in pulse rate* are usually due to the anesthesia being too deep, although it may be caused by hypercapnea, or hypoxia, or by an acute myocardial infarction. Straining, bucking, and coughing during the induction of anesthesia may decrease coronary blood flow and lead to myocardial infarction. If the blood pressure continues to fall despite lightening of the anesthesia and fresh soda lime, then pressor drugs should be used, since multiple coronary occlusions may develop from shock itself. If severe hypotension develops, Levophed is the most potent and reliable

pressor agent. Wide swings in blood pressure should be avoided. All pressor drugs available increase ventricular irritability to some degree, although Levophed does this less than other drugs presently available.

Transfusions should always be equal to blood loss during the operation.

The development of certain *arrhythmias* during an operation may demand immediate treatment. Common causes of arrhythmias are depressed ventilation or obstructed air passes with ensuing hypoxia or toxic levels of carbon dioxide. Sudden auricular fibrillation or flutter, or auricular or nodal tachycardias, are treated with intramuscular quinidine or sometimes intravenous digitalis preparations. Very frequent ventricular premature systoles or ventricular tachycardia usually respond to intravenous Pronestyl, or intramuscular quinidine, or to intravenous potassium chloride.

Cardiac arrest, although sometimes unaccountable, is usually due to one or more recognized causes. These are hypoxia, excessive anesthesia or sensitivity to anesthesia, hypercapnea, reflexes from manipulation of the heart or other intrathoracic organs or the stomach, or intubation of the trachea, or changes in position during anesthesia. The presence of heart disease makes arrest more likely, and successful resuscitation is less likely in these patients.

The sudden failure of the pulse and blood pressure, coupled with the absence of pulsation in exposed vessels, constitutes irrefutable evidence of arrest and demands immediate treatment without further delay. In order to be successful, treatment must be begun within the space of several minutes.

Complete cardiac standstill accounts for the majority (88%) of cases of cardiac arrest, while ventricular fibrillation is less common (12%). The details of treatment are beyond the scope of this paper. The most widely proven effective method of treatment is direct cardiac massage through a transthoracic incision, combined with the immediate initiation of artificial respiration using 100% oxygen in a closed system. Later, ventricular stimulants may be injected if necessary in the case of asystole, or electrical defibrillation may be used in the case of ventricular fibrillation.

Recently Dr. Paul Zoll has perfected a promising machine that gives an alarm

when cardiac arrest occurs, and can then stimulate and maintain ventricular systole in cases of ventricular standstill, all without opening the chest.

Mention should also be made of the simple and occasionally effective method of initiating ventricular systole by thumping on the chest over the heart with the fist.

Postoperatively

In the postoperative period it is equally important to walk the tight rope between preventing any fall in blood pressure and avoiding the administration of sodium-containing fluids above that which is lost.

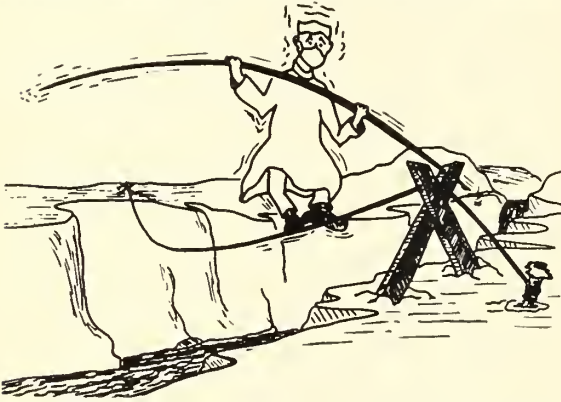


Fig. 1—In the postoperative period it is equally important to walk the tight rope between preventing any fall in blood pressure and avoiding the administration of sodium-containing fluids above that which is lost.

(Fig. 1). Either shock or dehydration may lead to coronary thrombosis in patients with coronary atherosclerosis, while excess sodium may cause sudden severe left ventricular failure. "That which is lost—whether it is whole blood, water, electrolyte, or protein—should be replaced as accurately as possible; no more and no less."

Venous thrombosis is especially likely to occur in patients with heart disease. One of the worst and most prolonged periods of immobilization and impaired venous return is during the operation. Dr. James Donald has told me of a technique he uses that seems especially worth while in this respect. He always massages the patient's legs and exercises them on the operating table immediately after surgery. After this they should be exercised and gently massaged by the nurse every 3 hours.

Postoperative coronary occlusion is most likely to occur in the first 3 days and more often in patients where shock has been present. The picture is usually similar to that

of pulmonary embolism with shock, dyspnea, and cyanosis. Precordial pain is most often absent or slight. The treatment is similar to that of any coronary occlusion. Heparin is the preferable anticoagulant because there is less tendency toward hemorrhage from raw surfaces.

Doctor Suggests Lifetime Personal Health Book

—A lifetime personal health log—a sort of cousin to the traditional baby book has been suggested by a Chicago medical school professor.

Dr. Carl A. Dragstedt, professor of pharmacology at Northwestern University Medical School, made his suggestion in a signed editorial in the April 14 issue of the *Journal of the American Medical Association*.

"What everyone in this country needs," he said, "is a good personal health log. By that I mean a suitable booklet in the permanent possession of everyone, in which would be recorded some of the important aspects of his health record, encompassing items from his family history, and data on such things as his vaccinations and inoculations, his diseases and operations, his blood pressure, blood cell counts, and similar laboratory findings. It would be for him, and all of his contacts with hospitals and physicians, somewhat comparable to a permanent passport for travelers. Upon consulting a physician or entering a hospital, he would submit his health log. This would save considerable time now consumed in taking his history and would have the added advantage of being much more accurate and reliable than the frail memory of an anxious patient. Upon the termination of his illness, the log would be returned to the patient.

"The American citizen pays a considerable amount of money to get well and to keep well. . . . Upon settling up with his hospital or his doctor, the patient's log would be returned to him, brought up-to-date as to salient items regarding what was found and what was done. As it is, I dare say that for a great many people in the United States there is much information that has been gathered incident to sicknesses, hospitalizations, and periodic health examinations that is scattered amongst various hospitals and doctors' offices and becoming more and more inaccessible with time."

Dr. Dragstedt said the book should be durable enough to last a lifetime and should be about 4 by 7 inches in size, so it could easily be kept with other books on a shelf and yet be carried on occasion in the pocket or purse. Dr. Dragstedt thought that agreement on exactly what should be included in the book could easily be worked out.

Almost every baby born in the last 10 years has been launched with a baby book, which has space for information about inoculations and vaccinations. They have proved "extremely serviceable" during the childhood years, but in few instances have they been continued, he said, concluding:

"The idea of the log book is thus not entirely new, but is merely an extension and amplification of one that seems to have worked rather well in a limited field."

Pills May Some Day Replace Insulin Injections

—A sulfonamide derivative which can be taken in pill form may some day replace insulin injections for certain types of diabetics, according to two Indianapolis physicians.

Experiments with the drug, carbutamide, have been widespread in Germany and are now being carried on among several hundred diabetics in this country. Its exact role in the treatment of diabetes is still to be determined, but it appears to be helpful in some cases of the disease, the doctors said in the April 14 *Journal of the American Medical Association*.

On the basis of research done so far, it is unlikely that the drug will be on sale for some time. At present it is available only for experimental purposes. Many other products have been tested in the hope of replacing insulin injections but none have worked well enough.

Carbutamide (called BZ-55 by its German investigators) and a related compound, tolbutamide, which is also being tested, are classed with the germ-killing sulfonamide derivatives which have been shown to lower blood sugar levels. This lowering—essential to life for the diabetic—is now done through diet and by giving insulin injections to make up the shortage of insulin resulting from either poor production by the pancreas or destruction of insulin by some unknown agent in the body.

Drs. Anthony S. Ridolfo and William R. Kirtley of the Lilly Laboratory for Clinical Research, Indianapolis General Hospital, said their tests among 31 patients showed that carbutamide may help diabetics who are mature, obese or overweight, have relatively mild cases of short duration and have not required large amounts of insulin. However, it does not work among young diabetics or those threatened with coma. The usual diet restrictions must be kept even by patients who could satisfactorily substitute the drug for the injections and by those whose insulin requirements were reduced by the drug.

Time and experience are needed before any final evaluation can be made of the drug, and in the meantime it must be used with caution, they said. Only one of their test patients showed any toxic side-effects from the drug and they were temporary, but further experience is necessary to determine the actual extent of possible side-effects.

An accompanying editorial in the *Journal* said that it is still too early to predict carbutamide's future role in the treatment of diabetes. Before the drug can be used extensively, exhaustive trials must be conducted to determine its site and method of action, its possible harmful side-effects, and its actual value in treating diabetics.

The editorial warned that indiscriminate replacement of insulin injections by one of the new drugs carries certain risks, especially in the presence of complications such as infection, surgery, or acidosis, a condition of acid-alkaline imbalance in the body. In these situations the new drugs have no place and insulin is the "irreplaceable drug of necessity."

Traction Device Resembles Corset and Puttee

—Two California doctors have successfully tried out a device for leg traction in hip and back dis-

orders which is something like a cross between a lady's corset and a soldier's puttee.

Drs. Carl E. Anderson and R. Dee Robbins, Santa Rosa, Calif., devised a simple one-piece skin traction legging of foam rubber and elastic corset material with attached straps and buckles which can be applied by patients or other untrained persons with little instruction or risk.

They used the traction legging over a period of five years on about 1,000 patients, both at home and in the hospital, with satisfactory results and none of the serious skin, nerve, or circulatory difficulties often caused by skin traction.

The legging is wrapped around the lower leg between the knee and ankle and buckled in place. A spreader is attached to the lower end and the desired weight applied over a pulley to keep a steady lengthwise pull on the lower leg. Neither skin adherent nor padding is necessary.

Advantages of the legging over conventional skin traction devices are its simplicity of application and adjustment which permits use by an unskilled person; the fact that it is one piece and eliminates the need for a variety of materials, and its relative freedom from serious complications, the physicians said.

Automatic Injector Reduces Pain, Apprehension

—Persons who have to give themselves daily injections of drugs can now do so without having to look at the needle and without having to muster up courage to pull the trigger.

They can use a new device called the Presto injector which fits around and hides the needle and syringe and which automatically releases the needle when the injector is pressed against the skin.

The new injector not only relieves apprehension, but also reduces the pain, because the needle passes quickly through the pain-sensitive layer of skin, according to Frank H. J. Figue, Ph. D., and Vernon M. Gelhaus, M. D., Baltimore, who tested the instrument, developed by investigators of the Becton, Dickinson Company, Ruthersford, N. J.

They described the injector in the April 14 *Journal of the American Medical Association*.

The instrument is a series of metal cylinders in which the syringe and needle are placed. When the instrument is ready for use, the needle is entirely concealed in the bottom cylinder. The top part of the cylinder holds the syringe and also conceals the spring mechanism which activates the automatic trigger.

After cocking the trigger by extending the two parts of the cylinder, the rubber foot is pressed against the skin until the automatic trigger releases the spring which pushes the needle and syringe straight forward at high speed. After the needle has entered the skin, the vaccine is injected in the usual way by pushing the syringe plunger.

The fact that the needle is entirely hidden from view has a "very remarkable" effect, especially among children, they said. The very sight of a needle apparently leads many patients to receive "an exaggerated impression" of the pain actually produced, they said. . . .

THE JOURNAL
of the

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DELEGATES AND ALTERNATES TO THE AMERICAN MEDICAL ASSOCIATION

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(Term: January 1, 1955-December 31, 1956)
Delegate—J. Paul Jones Camden
Alternate—D. G. Gill Montgomery
(Term: January 1, 1956-December 31, 1957)

HOSPITAL COSTS

A prediction that hospital costs would “continue to increase at about 5 per cent annually for many years” has been made by Ray E. Brown, president of the American Hospital Association.

He said: “Unless there is a very significant decrease in the general economic situation, we must expect hospital costs to increase at about 5 per cent annually for many years. Only by the best efforts of hospital boards, administrators, medical staffs and all members of the hospital team can costs be held within that level of increase.”

Mr. Brown, who is superintendent of the University of Chicago Clinics, based his prediction on a study he had made on hospital costs and services during the period 1946-1954. His article, “The Nature of Hospital Costs,” appeared in the April 1 issue of Hospitals, Journal of the American Hospital Association.

“Whatever answers there are to the problem of hospital costs must be found in the area of personnel budgets,” the American Hospital Association president concluded.

Contrasting the hospital as a personal service institution with general industry, Mr. Brown wrote: “The nature of the hospital’s work provides little opportunity for . . . productivity gains. Nonetheless, hospital salary levels are affected by general salary levels. Under such circumstances every round of salary increases constitutes a direct increase in hospital costs.

“Over the years ahead, as the general labor force continues to receive its rightful share of the proceeds from increased productivity, hospitals will be compelled to give equal increases in salary without comparable benefits from increased productivity.”

Mr. Brown pointed out that before World War II the preponderance of women workers in hospitals and the lack of competition for female help were factors in keeping hospital wage scales low. He noted that women make up about 80 per cent of the average hospital’s work force. The AHA president wrote: “It was not until the necessities of war production demonstrated the equal ability, and even the superiority, of women in many types of industrial work that women found a substantial place in industry. Hospitals benefited until that time

from the lack of competition for female personnel and the low wage scale that went with limited employment opportunities. Since that time hospitals have been forced to do a double step in order to keep pace with general wage increases while at the same time upgrading their entire salary levels to meet the going wage rates of industry."

Increases in hospital services calling for added equipment and personnel are another factor in the rising cost picture, according to Mr. Brown. "The largest increase in personnel," he wrote, "is attributable to new services and this has an accumulative influence. The provision of new services and new procedures which permit the physician to diagnose and treat more varied and more complex conditions requires a more exacting control and increased use of existing procedures. cursory studies made on this question indicate that the number of routine procedures per patient day has increased more than 30 per cent in the past nine years."

He observed that "The increasing intensity and complexity of hospital service is to some extent reflected in the comparative figures for hospital capital assets. The total capital value of all short-term, general hospitals was approximately \$3,100,000,000 in 1946." In 1954, he said, the total capital value was \$6,177,500,000.

He explained that from 1946 to 1954 "hospitals had to recruit five times the average for all other employers . . . Hospital employees have gained salary increases at fairly close to twice the average rate for the rest of the nation's work force during the nine-year period."

GALACTOSEMIA

The cause of an often fatal metabolic disease of children has been discovered by scientists of the Public Health Service's National Institute of Arthritis and Metabolic Diseases, according to Surgeon General Leonard A. Scheele.

Drs. Herman M. Kalckar, Elizabeth P. Anderson, and Kurt J. Isselbacher, in work conducted at the National Institutes of Health, Bethesda, Maryland, have unraveled much of the mystery surrounding the little understood children's disease, galactosemia, also known as galactose diabetes.

This disease ordinarily appears within a

few days after birth. The infant suffering from galactosemia is unable to utilize or even tolerate milk in any form. Lactose, often called milk sugar, contains another sugar, galactose. This substance cannot be handled by the child's system if he has galactosemia.

The Institute scientists have discovered a hitherto unknown enzyme in normal red blood cells, which they call P-Gal transferase. This enzyme, they found, is necessary to complete conversion in the body of galactose into glucose, the common sugar of the blood.

Diagnosis of galactosemia is difficult because the symptoms are similar to those of other disorders. Diarrhea, lack of appetite, loss of weight, and jaundice appear in the earlier stages. In later stages, it leads to cirrhosis of the liver, mental retardation, blindness due to cataract, and death.

Early recognition of galactosemia is highly important, since the disease progresses rapidly, leaving serious irreversible changes. On the other hand, when diagnosed in an early stage, treatment is simple. The affected child, placed promptly on a milk-free diet, will grow and develop normally.

The discovery of the basic cause of the disease promises to provide a rather simple diagnostic test, making earlier life-saving treatment possible.

Scientists at the Institute became interested in the disease when research workers in Manchester, England, reported certain abnormalities in the red blood cells of infants with galactosemia. Their own work has revealed that the enzyme, P-Gal transferase, which they had found in normal blood was missing in the blood of children with this disease, and that this inherited metabolic defect was the basis of the disorder. A report on their research is published in a recent issue of the Proceedings of the National Academy of Sciences.

Knowledge of P-Gal transferase not only makes possible the development of a rather simple diagnostic test for galactosemia, but it also points the way to exploration of the distinct possibility that impairments in galactose metabolism may be a factor in other disorders of unknown origin.

POLIO FOUNDATION RENEWS NURSE RECRUITMENT GRANT

The continuing need to interest more students in nursing as a career has led the National Foundation for Infantile Paralysis to make a grant of \$46,247 to the 1956 program of the Committee on Careers, National League for Nursing. Announcement of the grant jointly by John H. Hayes, chairman of the committee, and Basil O'Connor, president of the foundation, marks the seventh year of NFIP support to the national nurse recruitment program.

The committee reports that the largest nursing force in history is active today—400,000 professional nurses and 100,000 practical nurses. However, unprecedented population growth, advances in drug therapy, extension of health facilities, shorter work week for nurses, and other factors are steadily expanding the need for nursing personnel.

This year schools of professional nursing are seeking 50,000 new students. Practical nursing schools have openings for another 20,000 students. The committee's 1956 program is designed to help nursing schools meet these goals, and, in addition, to encourage graduate nurses to prepare for supervisory, administrative and teaching positions.

The program has two phases: national promotion of nursing as a career through such activities as the distribution of literature, and field service assistance to state and local nurse recruitment groups. The NFIP grant underwrites the field service activities.

"More nurses will help assure adequate care for polio patients," Mr. O'Connor said. "With the demands for nurses for all fields outstripping the supply, both care and disease prevention programs can be endangered unless more young people are attracted to a nursing career."

A unit of the National League for Nursing, the Committee on Careers, is sponsored also by the American Nurses' Association, American Medical Association, and American Hospital Association. Its program is under the direction of Mrs. Muriel C. Henry.

Reasons Given for Delay in Seeking Surgical Care—A new explanation of the familiar experience of putting off a visit to the doctor even when danger signals are present has been given by a group of Cincinnati researchers.

One of their major findings in a survey of Cincinnati surgical patients was that people do not delay just because they aren't aware of what the danger signs mean.

In fact, among 200 patients, the person who was totally ignorant of the importance of danger signals was "extremely rare," indicating that the medical profession and medical publicists have done a good job of educating the public, they said in the April 7 *Journal of the American Medical Association*.

Of the 200 patients surveyed, 23 had no opportunity to delay seeking surgical treatment, and no information was obtained on 11. Of the 166 patients who had an opportunity to delay, 71 did so, they said.

Many of these delayed, not because of ignorance of the danger signs' meaning, but because of various personality and emotional factors, the survey showed.

In addition, it disproved several other reasons frequently given as causes of delay. Delaying patients were of all ages—not "young and foolish" or "old and fatalistic." There was no difference in intelligence between those who delayed and those who did not. Sex was not a factor; men and women were almost equally represented in both delay and nondelay groups.

The survey neither confirmed nor denied the idea that cost influences delay. All of the patients were in a hospital which provides care even for those who cannot pay, but some might have delayed because they were ashamed of having to accept free treatment.

Their study also disproved the idea that delay is a symptom of one or another specific type of mental illness. There was no significant difference in the psychiatric diagnoses of delayers and nondelayers.

The researchers did find, however, that delay resulted from various conscious and unconscious factors operating before, during, and after recognition of a sign or symptom. The kind of illness suffered could play a part in the delay, but was not by itself a sufficient reason, they said.

While the medical profession and publicists have been successful in reaching most persons with straight information about disease, there is still much to be done to overcome these emotional factors causing delay, the authors said, suggesting that there be some changes in the emphasis in public education and that more attention be paid to the emotional factors during medical and surgical treatment.

Making the report were James L. Titchener, M. D., Israel Zwerling, M. D., Ph. D., Louis Gottschalk, M. D., Maurice Levine, M. D., William Culbertson, M. D., Senta Cohen, Ph. D., and Hyman Silver, Ph. D., from the departments of surgery and psychiatry, University of Cincinnati College of Medicine. Dr. Zwerling is now at Albert Einstein College of Medicine, New York. The study was supported by a grant from the National Institutes of Health, Bethesda, Md.

TRANSACTIONS OF THE ASSOCIATION

1956 SESSION

PART I

TRANSACTIONS OF THE ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA HELD AT BIRMING- HAM, APRIL 19-21, 1956.

First Day, Thursday, April 19th

The Medical Association of the State of Alabama convened in annual session in the Terrace Ballroom of the Thomas Jefferson Hotel, Birmingham, and was called to order at 9:00 A. M. by the President, Dr. F. L. Chenault of Decatur.

Invocation was by Dr. John N. Lukens, Pastor, Independent Presbyterian Church, Birmingham.

Addresses of welcome were given by Hon. James W. Morgan, Mayor, City of Birmingham, and Dr. E. Byron Glenn, President, Jefferson County Medical Society, host to the Association.

Reports of committees were called for by President Chenault, each, in its turn, being referred without discussion to the State Board of Censors.

COMMITTEE REPORTS

Medical Service and Public Relations

The twelve months since the Association last met have been the busiest that your Committee on Medical Service and Public Relations has yet experienced. As will be seen from the following report, a vast majority of the work fell in the legislative field; however, every effort was made to continue other activities at their previous levels. Although from January through September, the Director was technically working directly under the Board of Censors, he did not sever his relations with this committee, which stood as one of his groups of advisers.

Prior to the general session of the Legislature, emphasis was placed on our internal organization, lines of communication, and motivation. By the first of May, each Legislator had been furnished with a packet explaining the Association's stand on the matter of cultism. These packets were the same as used two years previously, but they contained an additional statement entitled, "Our Stand—And Why," which reiterated again, and in more concise terms, the reason that the medical profession bestirs itself on this issue. This statement plus the two previous pamphlets entitled, "For Your Protection" and "The Ques-

tion Mark," were made available to the members of the Association for use in their offices and in talking with patients about the matter.

The legislative session which lasted from May until September was the most hectic that the members of this committee can remember. One of the proposals which was of particular interest to us was the one which would place certain earmarked funds in the general fund of the state. Dr. Douglas L. Cannon appeared before the Senate's Committee on Finance and Taxation in opposition to the measure. Other allied groups were also heard, and the proposal was never reported back to the Senate.

On one legislative day, four proposals were introduced; one of these called for a change in the State Board of Health. Under this proposal, the State Health Department and the State Board of Health would have been placed squarely in the field of politics. Newspapers and the profession took up the fight, and the sponsor of the bill withdrew it on the following legislative day.

The second bill called for the creation and establishment of a commission to investigate and study the medical licensure system of the State of Alabama, to determine the cause of the shortage of doctors in certain localities in the state. A third proposal would have had the State Board of Health furnish all prophylactic vaccines and serums to school children at the expense of the state. These two bills were referred to the House Ways and Means Committee, and neither ever came up for a hearing.

The fourth would have required all public hospitals to have open staffs. The definition of a public hospital was so broad that all hospitals of the state would have been included. The fight against this proposal was led by the Alabama Hospital Association, and it never came out of committee.

On the next legislative day, the chiropractic bill was introduced and referred to the House Judiciary Committee, as had been the Board of Health and hospital proposals. At the hearing, the Association's stand was made by Dr. Frank L. Chenault, Dr. E. V. Caldwell, and Dr. Tinsley R. Harrison. Lending them assistance from allied groups were Mrs. Lillian Smith, Dr. J. F. Volker, Dr. Edward E. Sealy, and Mr. Duncan Smith. The medical profession owes a debt of gratitude to these people, for they were subjected to a stronger grilling than had been the case previously. No action was taken on the proposal on the day of the hearing.

On the same day that the chiropractic bill was introduced, a proposal was also introduced and sent to the House Judiciary Committee which would establish the right of injunction against any person unlawfully engaged in the practice of any profession. This bill was later reported

favorably but died on the calendar of the House without ever coming to a vote.

Immediately after the onslaught of so many proposals, there was a call meeting of the State Board of Censors and the College of Counsellors. The meeting was naturally open to any physician. At this meeting, forty county medical societies were represented by some one hundred fifty people. Actions taken by this group lent great weight to those who represented the profession at the State Capitol.

Soon there was introduced a re-write of the Board of Health proposal. This one was perhaps not as obnoxious as the earlier one, but it still placed the health of Alabama citizens firmly in politics. This proposal was referred to the House Committee on Health. It was never brought out of the committee.

The situation in the Legislature had become so fluid that the Director of Public Relations requested a legislative advisory committee made up of the President of the Association, Chairman of the Board of Censors, the President-Elect, the immediate Past President, and the Chairman of the Committee on Medical Service and Public Relations. This group met with the Director and Dr. Gill at any time or place requested, and their work and advice were of tremendous value.

Toward the end of the session a concerted effort was made by proponents of the chiropractic bill to get it reported out of the Judiciary Committee. For two straight weeks, these efforts were continued. The medical profession is forever indebted to the six members of the committee who fought the battle and tried constantly to kill the measure. These men were: Messrs. Roberts Brown, O. J. Goodwyn, E. K. Hanby, Karl C. Harrison, M. T. Murphy, and Henry B. Steagall, II. To three other members of that committee, the profession owes a debt of gratitude. Messrs. N. S. Hare, George W. Hodges, Jr., and Francis W. Speaks stood with the other six in refusing to vote the bill out of committee. It is impossible here to explain the pressures which were brought to bear in this issue; but this Committee wishes to express the appreciation of the profession, and to have the names of the nine legislators permanently listed in the Transactions of the Association.

The Association's exhibit at the Alabama State Fair this year was on the transplanting of arteries. A pamphlet entitled "New Arteries For Old" was prepared for distribution at the exhibit booth. Some five thousand people stopped at the booth and took a copy of the pamphlet. The Committee wishes to thank Dr. Champ Lyons and Dr. Sterling Edwards for their great assistance in preparing both the exhibit and the pamphlet.

As was done last year, the committee offered the civic clubs in the state copies of the pamphlet used at the Fair. Three hundred eighty-three civic clubs distributed some 15,000 copies of the pamphlet to their members. As in the past, when there was a physician member of the club, he handled the distribution; and if there were not a physician, the Secretary handled the job.

The committee is indebted to these people for helping in this health education endeavor.

The Physician Placement Service has continued to grow. During the year we have been able to get a larger number of physicians in contact with towns seeking medical service. There is no way of ascertaining exactly how many have been materially assisted, but it can be said that a goodly number of towns and physicians have written in appreciation of our efforts.

Our close liaison with the Washington Office of the American Medical Association has been continued. Prior to the suggestion by the A. M. A.'s House of Delegates, we conducted a survey of the profession in Alabama on the matter of Social Security. From this, it was learned that our members oppose compulsory coverage under the Old Age and Survivors Insurance plan, but voluntary coverage for those desiring it is advocated. Further the profession is opposed to cash disability benefits at the age of fifty, the lowering of the present age requirements, and an increase in the money to be paid.

The committee wishes to thank the Woman's Auxiliary for its continued assistance, especially is this so in the instances of their handling a proposed essay contest on "The Advantages of Private Medical Care" and of their work with the American Medical Education Foundation.

A special committee on the American Medical Education Foundation will make its own report. This committee has worked with them and wishes to commend them for the greater results that they have attained during the year.

The Director has continued assisting such groups as the Alabama Academy of General Practice, the International College of Surgeons, the American College of Surgeons, and other specialty groups. The committee is cognizant of the programs that these groups are sponsoring and commends them highly. The work being done by the Alabama Academy of General Practice with the medical students is of great value and should receive our support.

The routine functions of the Public Relations Office, such as publicity on meetings, health articles for newspapers and the like, need no listing here. They have been continued throughout the year.

Expenditures for 1955 were as follows:

Salaries		
Director	\$7,200.00	
Clerical Assistance	5,598.50	\$12,798.50
Travel Expense		
Committee	198.74	
Director	2,794.53	2,993.27
Printing		
Health Column	267.80	
Lit. & Bulletins	873.34	1,141.14
Office Equipment		20.86
Office Rent		970.00
Stationery and Supplies		1,721.25
Telephone and Telegraph		615.49
Postage		2,044.81
Library		45.15
Exhibit		
Rent	125.00	
Supplies	19.81	144.81
W. A. M. A. S. A. Newsletter		200.00
Miscellaneous		500.95
		\$23,196.26

The appropriation to this committee for the year was in the sum of \$19,710.00. You will note that expenditures exceeded this amount. This is the second year straight running that such a situation has occurred. Although the committee has some reserves, present programs and activities are rapidly decreasing them. The following is a financial statement for 1955:

Total funds brought over from 1954 (exclusive of savings account & bonds).....	\$ 2,428.13	
Total of 1955 appropriation (from dues collected in 1955).....	19,710.00	
Grand total of Medical Service and Public Relations funds (exclusive of savings).....	\$22,138.13	
Expenditures (1955)		
Amount spent (1-1-55 through 12-31-55)	\$24,348.91	
Credit due for refunds (1-1-55 through 12-31-55)	1,152.65	23 196.26
Deficit	-\$ 1,058.13	
Medical Service and Public Relations Savings		
14 \$1,000 Series J—U. S. Savings Bonds	\$10,080.00	
Savings Account No. 35412	3,000.00	
	\$13,080.00	

The committee feels that under present circumstances we have gone about as far as possible. At the same time, we feel that our efforts, particularly with the public, need augmenting. Contingent upon sufficient funds, the committee is planning an expanded program which will include an expansion of the physician placement service; a speaker's bureau; medical forums; a closer liaison with the other groups such as the Farm Bureau, Extension Service, the Press, the Bar Association, Dental Association, Pharmaceutical Association, and the like; an extension of emergency call systems; television programs; radio programs; survey of health facilities; and a public safety program.

Within the profession, where there is room for great improvement, the committee plans public relations forums; a dynamic program to reach the medical students, interns and residents within the state; and a closer liaison with all specialty groups.

There are several things within the organization of the committee that seem indicated. Presently, the Association's President, President-Elect, and Secretary, the President of the Woman's Auxiliary, and the Secretary of the Board of Censors sit with the committee. We feel that the four vice-presidents of the Association should be invited to sit as ex-officio members. Further, it is felt that the regular membership of the committee should be increased to fifteen to be certain that all geographical sections of the state are represented. Presently, there are three members of the Board of Censors on the committee. It is felt that there should be but one, who could serve as proper liaison between the two groups. These recommendations, if effected, would stimulate interest in an ever increasing segment of the membership of the Association in our problems.

Although the next general session of the Legislature does not come until 1957, there are certain determinations relative to that meeting which should be made in the very near future.

These you will hear of as soon as plans can be formulated.

There are certain recommendations which the committee desires to make concerning the internal organization of the Association. First, it is recommended that the Association institute an indoctrination course for all new members, that attendance be made compulsory, and that the Association consider holding such a course on the day prior to the annual session or on one of the evenings during the annual meeting of the Association. The committee feels that this is one method of disseminating information to new members—information on the Association, its work and philosophy, medical ethics and the like.

Relative to the Board of Censors, there are two recommendations. First, when the Board is sitting as a Board of Censors, that the vice-presidents be invited to sit with the Board and, second, when sitting as a State Committee on Public Health, that the Board give serious consideration to augmenting its membership with an advisory committee made up of representatives from allied groups, as well as from other groups, who could advise from the viewpoint of a non-medical person.

There are a number of committees listed, but many of these are relatively inactive. At the same time, the Committee on Medical Service and Public Relations is attempting to carry too many diverse programs. It is recommended that the committees of the Association be studied, that those needed be revitalized, that new ones be created where needed, and that unnecessary ones be dropped. The Board should look to these committees to handle the detailed background work and to make substantiated recommendations to the Board or to the Association in annual session. Such a plan would not only reduce some of the many demands made on the Board but also spread the responsibility for the proper functioning of the Association.

It is the feeling of this committee that enough members are not cognizant of the work done by the Board. The recommendations on committees would help to a certain degree, but the Board should also consider some means of disseminating information to the membership relative to Board activities and decisions. This might be done either through an organizational section in the *Journal* or by means of a newsletter.

As a means of stimulating more interest in the Association and its work, as well as a means of making the organization more democratic, it is recommended that the annual session be set up on a system such as that used by the American Medical Association. All reports of officers and committees should be made to the central office early enough for mimeographing and placing in the hands of each delegate to the annual session, as well as in the hands of each Counsellor. These reports along with all resolutions which are being introduced should be sent to reference committees which would be created to study them, hear arguments pro and con, and make recommendations to the Board for referral to the Association when it meets on Saturday morning.

Under our present setup, it is an impossibility for a man to vote intelligently at the Saturday morning session. Such a system as the one briefly outlined here should improve the situation.

The work of the Association has grown tremendously in the past few years. There are many things which the Association should be doing but is not, and it seems that the work will continue to increase. This committee recommends that the Association create the office of executive secretary and hire an assistant. These two people should divide the work which must be done. A central office, under the executive secretary, should see to the proper functioning of all committees, the handling of the rolls of the Association, the collection of dues for the Treasurer, and should serve as the business office for the publishing of the *Journal*.

Our proposed expansion of program will necessitate additional office space. Realizing this, this committee asks the Board of Censors to set up a committee for the purpose of seeking, purchasing or building, and financing a Medical Association building.

The proposed expansion will require additional money. Since the cost of the public relations work has exceeded appropriations for two years straight running and since this work in 1955 exceeded appropriation by some three and one-half thousand dollars, the committee reiterates its belief that every man in active practice should carry his share of the load, except when a hardship is imposed. It is recommended, therefore, that as of January 1, 1957, all members of the Association in active practice, including Counsellors, begin paying annual dues of fifty (50) dollars, except those on whom a hardship would be imposed as decided by the County Medical Society, they to be excused from payment of dues.

This committee has not prepared a budget for 1956. Such is impossible until action is taken by the Association on the recommendations made by the committee.

The committee urges serious consideration to each of the recommendations. The members know the needs which the Association faces, and it is believed that these recommendations will help lead us in the proper direction.

As my term of service as Chairman of the Committee terminates at this annual session, I would like to express my deep appreciation to each member of the committee for the unvarying and superior individual and collective cooperation given in execution of the many and often trying activities for which this group is responsible.

Also, I must tell you of a deep and abiding affection, shared with each of you, for the Director of this program. It has been a rare privilege to have worked closely with William A. Dozier, Jr. Too few are aware of his tireless effort in the tasks of this committee and the Association as a whole. Even fewer are cognizant of his periods of despair, occasioned not by thought of himself but by a sincere impression that his efforts on our behalf have not been suffi-

cient. It is needless to add that on such occasions we, the members of the Association, have failed in the support due our Director, the converse has never occurred. Surely, we are blessed beyond reasonable expectation in having one so dedicated in our aim and purpose to direct our program.

Respectfully submitted,

J. O. Finney, M. D.,
Chairman

J. Michaelson, M. D.
S. W. Windham, M. D.
M. V. Adams, M. D.

H. C. Byrne, M. D.
H. L. Holley, M. D.
H. G. Hodo, Jr., M. D.
J. G. Daves, M. D.
A. C. Gipson, M. D.
J. P. Jones, M. D.

Ex Officio
F. L. Chenault, M. D.
D. L. Cannon, M. D.
D. G. Gill, M. D.
Mrs. W. G. Thuss

Maternal and Child Health

CHILD HEALTH

During the past year, much emphasis has been placed on immunizations on account of the Salk Vaccine, and this interest was further stimulated by an increase in whooping cough and diphtheria in certain locations. The increase in these latter two diseases demonstrates the failure of the medical profession in its program to immunize all children. The schedule for immunizations of the children with the polio (Salk) vaccine has served to demonstrate what a large part of this program is carried out by the public health units. Strictly speaking, a public health program should be limited to those measures that cannot be properly carried out by the individual, such as food and meat inspection and milk control and so forth. Therefore, individual immunizations for certain diseases should be given by the private physician and should be administered by the public health units only in the case of the medically indigent. In the large communities, especially where there are pediatricians to push the program, a larger percentage of the children are immunized in the entire population, and, conversely, a smaller number are immunized by the public health units. Your committee would like to urge every physician in the state of Alabama who has responsibility for any children to acquaint himself with the accepted schedule for immunizations. A brochure on these recommendations can be obtained from the American Academy of Pediatrics, Evanston, Illinois, for one dollar. If every physician would diligently pursue this program, the publicity would be widespread and more immunizations would be accomplished. Your committee feels that most patients would prefer to get these immunizations from the private physician rather than from the public health department. If this program had been well established before the advent of the Salk vaccine, fewer people would

have depended on the public health department for these immunizations in spite of the tremendous amount of publicity given to free inoculations. This opinion is borne out by the report from the State Health Department that as of March 1 eighty-three per cent of the polio shots in the state had been given by the Public Health Department, while in Jefferson County only fifty per cent had been given by the Public Health Department.

Last year, your committee reported that a study was being made of the premature deaths for the year 1954. The following is a brief summary of the data obtained:

Out of 785 questionnaires sent out, only 405 were returned. Of these, 17 gave unsatisfactory information, leaving only 48 per cent of the total being relatively satisfactory. Even in this 48 per cent, there were individual figures and statements on many questionnaires that could not be used.

	1954 Total White Colored		
Prematures per 1000 live births	79	66	100
Premature deaths per 1000 live births	8	6	10

Thus you can see that the premature death rate was roughly 10 per cent in all three categories.

	1954
Delivered by physician	350—90%
Delivered by midwife	38—10%
Delivered in hospital	331—85%
Less than 500 gr.	15—4%
500-1000 gr.	78—20%
1000-1500 gr.	116—29%
1500—2000 gr.	90—23%
2000-2500 gr.	57—14%
Weight not stated	44—11%

In analyzing the death certificates of the 380 questionnaires that were not returned, these percentages were essentially the same.

Your committee urges every physician doing obstetrics to use every precaution in the expected arrival of a premature baby to see that the best possible preparations are made to insure the survival of the baby. Especially should these physicians see that the hospitals make adequate preparation for the baby. It is realized that in the smaller hospitals it is impossible to delegate personnel only for an individual premature baby. However, in such hospitals, it is tremendously important to stress the necessity of utmost cleanliness and to stress the fact that no one with any known infection should be permitted in the nursery.

Your committee would further like to urge greater attempts at preventing premature deliveries. Educational measures should be undertaken to see that all women have prenatal care.

Your committee will continue to function, making use of the above information as well as other information obtained in the study.

MATERNAL HEALTH

There were 86 maternal deaths in the state of Alabama during 1955. The causes of death, in order of their frequency, were as follows:

Eclampsia	19
Uterine hemorrhage	15
Ruptured uteri	12
Pre-eclampsia	12
Ectopic pregnancy	6
Septic abortion	5
Puerperal sepsis	4
Cardiac failure	3
Pulmonary embolism	2
Anesthetic deaths	2
Amniotic fluid embolism	2
Pneumonia	1
Cardiac arrest	1
Cerebral embolism	1
Postcesarean wound disruption	1
Total	86

By combining eclampsia and pre-eclampsia it will be noted that toxemia of pregnancy was the cause of death in more than one-third of all maternal deaths in the state during the past year. There were 19 eclamptics, most of whom received no medical care until they sought aid for convulsive seizures. The management of these eclamptics was for the most part conservative, in that all efforts were directed towards improving their physical condition before attempts were made to induce labor or to empty the uterus by cesarean section. It is widely appreciated that cesarean section is contraindicated in the acute eclamptic state, yet a few of these patients were taken directly to the operating room for abdominal delivery under general anesthesia immediately upon admission to the hospital. Eclampsia is the one obstetrical disease where "an ounce of prevention is worth a pound of cure." Good prenatal care, including diligent application of our present basic knowledge of proper diet, rest and wise use of the hypotensive drugs would have largely reduced the mortality in this category.

Uterine hemorrhage was the second most frequent cause of maternal death in Alabama during 1955. Eleven of these were postpartum, one postabortion and three antepartum. The large number of deaths due to postpartum hemorrhage emphasizes the need for careful conduct of the third stage of labor and close observation for the next hour, which some authors have called the fourth stage of labor. All placentas should be carefully inspected following delivery to see that no parts of this organ are missing. If hemorrhage is profuse before delivery of the placenta, manual removal should be executed without delay. If profuse hemorrhage persists following removal of the placenta, the genital tract should immediately be examined for retained pieces of the placenta and for lacerations and/or rupture. In case of a relaxed uterus, it may be compressed bimanually, while oxytocics and blood replacement therapy are instituted. It is felt that invasion of the uterus for manual removal of the

placenta in cases of postpartum hemorrhage is less dangerous now that we have antibiotics to combat infection.

It is amazing that 12 deaths were incident to ruptured uteri. Eight of these were man-made, and of these eight, three were due to version and extraction, three to Pitocin drip in granmultiparas and two to previous cesarean section. Ruptured uteri should be anticipated when version and extraction is done in prolonged labor cases with ruptured membranes, and also when Pitocin is used in granmultiparas. All patients who have had previous cesarean section should be closely observed for rupture of the old scar. The danger in these cases is increased many fold if the placenta is implanted beneath the scar.

There were five deaths due to septic abortion, most of which were non-therapeutic induced abortions and, in one case, autopsy revealed a perforation of the uterus caused by a hard rubber catheter found protruding through the perforation into the peritoneal cavity.

There were six deaths resulting from ectopic pregnancy during 1955, most of which were due to failure of the patient to seek medical aid, or misdiagnosis and/or mismanagement after the patient entered the hospital.

There were four deaths due to puerperal sepsis and, for the most part, these were in patients delivered at home or who developed the infection after being discharged from the hospital and who were not treated until the infection became overwhelming.

The remainder of the deaths were due to many causes. It is noted two deaths were classified as anesthetic deaths. Both were due to inhalation anesthesia, one ether, the other cyclopropane.

Cesarean section was done on 14 of the 86 patients who died. Four of these sections were on acute eclamptics, two following prolonged labor, for cephalopelvic disproportion, two for premature separation of the placenta, four for ruptured uteri, one postmortem section and one for a pelvic mass obstructing labor.

It is interesting to note that one death was due to postcesarean wound disruption.

An analysis of the clinical records of each maternal fatality reveals the following pertinent information:

Of the 86 deaths, 68 occurred in hospitals, 16 in the home, two in doctor's offices, and one in an ambulance.

Thirty-six fatalities were in the white race and 50 in the non-white race.

There were 22 autopsies performed.

Thirty-five live infants were born to 33 mothers in this group of patients. There were two sets of twins and in each of these instances, the mother expired as a result of toxemia.

MATERNAL DEATH RATE PER 1,000 LIVE BIRTHS

	Maternal Deaths	Live Births	Rate Per 1,000 Live Births
White race	36	49,675	0.72
Non-white race	50	31,542	1.59
Total	86	81,217	1.05

As a part of the scientific program, all maternal deaths in Alabama during 1955 were discussed at luncheon round tables at the annual meeting of the Alabama Association of Obstetricians and Gynecologists, April 18, 1956, at the Tutwiler Hotel, Birmingham, Alabama, in the following categories:

Discussion led by

1. Eclampsia—Thomas B. Woods, M. D., Dothan
2. Pre-eclampsia—Tom Boulware, M. D., Birmingham
3. Uterine hemorrhage—Josiah C. Carmichael, M. D., Birmingham
4. Ruptured uteri—Thomas C. King, Jr., M. D., Anniston
5. Septic abortion and puerperal sepsis—W. N. Jones, M. D., Birmingham
6. Ectopic pregnancy—John C. Hope, Jr., M. D., Mobile
7. Miscellaneous—Jos. W. Perry, M. D., Montgomery

All physicians who rendered medical care to any of these patients were invited to attend this meeting and avail themselves of the opportunity to discuss their case.

Summary: Although there was a slight reduction in the number of maternal deaths per 1,000 live births in the state of Alabama during 1955, as compared with 1954, there are three even more promising features of this report which make the future look brighter for safe delivery of expectant mothers in our state,

1. Every doctor in the state of Alabama in attendance at the time of a maternal death submitted a clinical abstract of the patient's illness, for evaluation by the Committee,

2. Twenty-two autopsies were performed—an autopsy rate in excess of 25 per cent, and

3. For the first time, in cooperation with the Alabama Association of Obstetricians and Gynecologists, all maternal deaths were discussed in open forum and every physician concerned was given an opportunity to participate in the discussion.

These three facts indicate the earnest desire of Alabama physicians to improve their knowledge and skill in the management of complications incident to pregnancy which, it is hoped, will be reflected in a continued reduction in maternal mortality.

Hughes Kennedy, Jr., *Chairman*
Thomas C. King, Jr., *Member*
Buford Word, M. D., *Secretary*

Cancer Control

Cancer continues to be the second cause of death within this state and the United States. Cancer will strike one in every four according to our present statistics. More than 40,000,000 Americans now living will develop cancer at some time if present rates continue. Cancer will strike approximately two out of every American family. On the average, 685 Americans die of cancer every day. At least 250,000 Americans will die of cancer this year. Cancer kills one man, woman or child every two minutes in this country.

EDUCATION

With the present facilities available for treating and diagnosing cancer, approximately one-fourth of those dying should be salvaged if the diagnosis is established early.

With this information at hand, the State Health Department under the leadership of Drs. Gill, Cannon and Smith are doing a considerable amount of education through the *State Medical Journal*. Hardly an issue of the *Journal* passes without some reference to cancer and often there are several special articles devoted to this topic.

The *Cancer Bulletin* is sent to every doctor in the state through the State Health Department. This publication reviews various phases of cancer. Particular emphasis is devoted to early diagnosis and treatment. The first doctor who sees the patient is usually the one who will determine if this patient gets well.

There are a number of moving pictures available for physicians and for laymen. These may be had through the Board of Health and also through the American Cancer Society. The films are as follows: Breast Cancer; Gastro-Intestinal G-I; Uterine Cancer; Cancer—The Problem of Early Diagnosis; The Exfoliative Cytologic Method in the Diagnosis of Gastric Cancer. There are other films in the process of making and, as time goes by, the entire field of cancer will be very well covered.

There is very close cooperation between the Cancer Control Committee of the State Medical Association and the American Cancer Society, Alabama Division. There are seven physicians on the Executive Committee of the American Cancer Society, Alabama Division, along with an equal number of laymen. The function of the American Cancer Society, as you realize, is first, education, particularly education of physicians. This is particularly true through fellowships, seminars, etc. The second function of the American Cancer Society is research and again this is directed by a national committee composed of physicians and outstanding laymen. The third function of the American Cancer Society is service to the patient.

It has been your chairman's privilege to attend several of the national meetings in New York, and I can report to you that it is an inspiring and thrilling experience to see the enthusiastic manner in which this group is accepting the challenge to fight cancer. Mrs. Meade, our executive director of the Alabama Division, will give a more detailed report of the activities of the American Cancer Society, Alabama Division.

CLINICS

There are six state-aid clinics operating within Alabama: two in Montgomery, two in Birmingham and two in Mobile. These clinics are for indigent patients who are properly certified through the local Health Department and Welfare Department. The clinics are under the Division of Cancer Control, State Health Department, Dr. W. H. Y. Smith, director.

In order for a patient to be eligible for one of these tumor clinics, he must be indigent. There is a form which should be filled out by the family physician in duplicate. This form should be turned over to the Welfare Department to investigate the patient's welfare status, and from the Welfare Department this application is sent to the State Health Department in Montgomery where it is acted upon.

Patients who are certified by their family physician should have a clinical diagnosis of cancer or an established pathological diagnosis. The tumor clinics throughout the state are not general diagnostic clinics, and if general diagnostic problems are sent through these clinics, it will cause considerable confusion and probably some misunderstanding. Terminal and hopeless cancer patients should not be sent to the tumor clinics, nor should patients who are not ambulatory.

Last year there were 1,502 applications through the cancer control division. Of this number, 1362 were approved, 1,101 attended the clinics, 261 did not meet their appointments at the clinics, 701 patients out of this group were diagnosed as malignant, 352 were non-malignant, 47 patients not diagnosed. There were 16 not approved due to financial status, 13 too advanced for clinic patients, there were 66 who had hospital insurance, there was one out of state patient, and 44 were not ambulatory.

Mobile Tumor Clinic had 117, Providence Tumor Clinic 31, Norwood Tumor Clinic 187, University Tumor Clinic 423, St. Margaret's Tumor Clinic 169, Oak Park Tumor Clinic 174—a grand total of 1101 tumor clinic patients in 1955.

The age group varied from newborns to 85 and above. The major portion of the patients were from 45 to 75. There were 276 white males, 425 white females, 96 colored males, 304 colored females.

Distribution of malignancies by site: There were 64 patients with cancer of oral and pharyngeal cavities, which included lip, tongue, salivary glands, mouth, oral pharynx, nasal pharynx and pharynx. The lip and tongue were the most common in this group. There were 70 patients in the gastrointestinal group, which included the liver and pancreas; 31 of these were large bowel, 18 stomach. The others were distributed between the esophagus, liver and pancreas.

There were only 12 cases of carcinoma of the trachea, bronchi and lung. This is an unusually small number and probably does not represent the true occurrence of carcinoma of the lung within the state. There were 75 cases of carcinoma of the breast, 45 white female, 29 colored female, one carcinoma of male breast. There were 159 carcinomas of the cervix, 96 colored fe-

male, 63 white female. There were 13 carcinomas of the uterus, 9 white female, 4 colored female. There were 9 carcinomas of the ovary. There were 28 carcinomas of the genito-urinary tract, 12 prostate, 5 bladder, 5 kidney. The others were distributed among the remainder of the genito-urinary tract.

There were 173 carcinomas of skin, 96 white male, 70 white female, 3 colored male, 4 colored female. There were 11 lymphomas, including Hodgkin's disease, and 11 leukemias.

The remainder of the malignancies were distributed among the bone, thyroid, mediastinum, brain and nervous system and non-specified sites.

As mentioned previously, only the patients are sent to the tumor clinics who have a reasonable chance of cure, or certainly amenable to some relief from their symptoms. We realize that the cancer clinics are not seeing every legitimate patient in the state, but do feel that a number of the cancer patients are being handled through this program.

With the limited means available, and I would like to mention here that this year there was a \$25,000.00 decrease in the appropriation for the cancer program over the year 1954, a great deal is being done. This is far from a progressive step and is disappointing to those interested in cancer control.

The only assistance that cancer clinics can give is while the patients are either within the hospital or when they attend the clinics. There are no facilities available for home care or nursing care. There will have to be a close relationship of the physician referring the patient to the various clinics if the patient is to receive the full benefit.

After patients have attended the various clinics, a letter is sent to the referring physician telling what has been done, what diagnosis was established, what suggestions are made, and the patient is also given instructions when to return to the clinic.

Again, I would like to put in a plug for the American Cancer Society for its cooperation in furnishing dressings to worthy patients. Transportation is provided for patients to and from clinics and, in special cases, specific drugs can be given, particularly drugs for relief of pain. These services have to be done on a limited fashion and under close supervision of the patient's referring physician.

RESEARCH

There are no specific research programs conducted by the Cancer Control Committee of the Association. There are a number of research projects going on within the state, particularly the Southern Research Institute in Birmingham. There are some smaller research projects at Auburn and the University of Alabama. Mrs. Meade will give a more detailed report on some of the research conducted under the auspices of the American Cancer Society, Alabama Division.

RECOMMENDATIONS

Every doctor's office should be a detection center as early diagnosis and early treatment are

the key to the cancer program with the present knowledge and facilities available. At least 80,000 additional patients can be cured yearly if our present information is made use of in the first stages of cancer.

There have been no specific changes in the treatment of cancer in the past year. The recognized treatments for cancer are destruction, either by surgery or by irradiation. There are a number of drugs being tried and some of the leukemias and lymphomas have been made to live more comfortably and longer. There are no specific cures as far as we know from drugs.

Blood is needed in the majority of these advanced malignancies, and it is advisable that Red Cross blood bank cards be available for all tumor clinic patients. Often securing blood becomes quite a problem.

All of us are aware of the need of the care of the terminal patient, particularly from a nursing standpoint. A number of cities have visiting nurse programs and probably these can be tied in with the tumor clinic patients to considerable advantage.

We should all see that through our legislators the cancer program receives the necessary amount of support so that our charity patients can be taken care of in proper fashion.

It is probably advisable that additional clinics be established, particularly in the northern part of the state, but these can be done only by request and cooperation of the local physicians and medical society.

RECOGNITION

The committee wishes to give recognition to the unselfish physicians who are giving so generously of their time in the six state-aid tumor clinics.

One can see from the report that there were over 1100 new patients seen in the tumor clinics last year besides the large load of old patients who are seen from month to month. The total load probably runs nearer 8,000 to 10,000.

Dr. W. H. Y. Smith and his staff are doing an excellent job with the tumor program, although they are greatly handicapped by a small appropriation and a very limited personnel.

It is probably time that we are thinking of having a full-time physician in the health department devoting his energies to the cancer program within the state of Alabama.

Again the committee wishes to express to Mrs. Lillian G. Meade and her staff of the American Cancer Society, Alabama Division, its deepest gratitude for their close cooperation in promoting education and trying to help eradicate cancer within Alabama.

John Day Peake,
Chairman
J. P. Chapman
T. B. Hubbard, Jr.
W. N. Jones
A. E. Casey

REPORT, ALABAMA DIVISION
AMERICAN CANCER SOCIETY
MRS. LILLIAN G. MEADE
EXECUTIVE DIRECTOR

As Executive Director of the American Cancer Society, Alabama Division, Inc., I am pleased to submit a report of work done by the American Cancer Society from April 1, 1955 to April 1, 1956.

The American Cancer Society, Alabama Division, is very proud of the fact that it is the only voluntary health organization approved by the American Medical Association, the State Medical Association, and the American College of Surgeons for its three-point program of research, education and service in the control of cancer. The Alabama Division will do everything possible to continue to merit this approval.

This past year has been an even busier one for the Alabama Division. It has increased the amount of money given for research in the state of Alabama, and the following institutions are now receiving grants from the American Cancer Society:

Southern Research Institute, Birmingham
Medical College of Alabama, Birmingham
Alabama Polytechnic Institute, Auburn
Tumor Registry, Birmingham
Tuskegee Institute, Carver Foundation, Tuskegee

One of the new projects of the American Cancer Society this year in the field of research was four grants of \$5,000 each to four young medical students, who, in the opinion of the Dean of the Medical College and the Director of Research, merit such special consideration.

In addition, a three-year grant of approximately \$7,000 a year was made to the Medical College of Alabama for a new project in the field of radio activity studies.

We have continued the purchase of antibiotics and hormones for the Tumor Clinic, and have also underwritten the cost of the rent for one year for the Cancer Research Laboratory, located in the Public Health Building.

To date over \$750,000 has been expended on cancer research alone in the state of Alabama by the American Cancer Society.

We continue to appropriate a sum of money, this year increased to \$1,800.00, to the Mobile Tumor Clinic for clerical assistance, thus making possible the approval of this clinic by the American College of Surgeons.

We've had an increase in the amount of work in our business and industry program. By this means we are reaching people we could not otherwise have an opportunity to contact.

We are now in the midst of our April 1956 Cancer Crusade, and we hope that it will be a success financially.

The national goal of the American Cancer Society this year is \$26,000,000. The increase was brought about largely because of the number of requests for cancer research grants that had to

be turned down by our organization last year for lack of funds.

We sincerely hope that when the April Cancer Crusade is over that we will have sufficient funds to make the necessary grants for cancer research, as well as other parts of our program.

The service program of the American Cancer Society has continued to grow. As you undoubtedly know, this organization furnishes medicine for palliative treatment to medically indigent cancer patients when so requested by the person's physician.

We also furnish bandage and dressing material to medically indigent cancer patients, and transportation to any of the state-aid clinics for those patients approved by the Cancer Division of the State Health Department.

The demands for aid are increasing every day, and the American Cancer Society will expand its service program as far as its funds will allow. However, we must not lose sight of the fact that research and education are our primary aims.

The American Cancer Society is cooperating with the Visiting Nurse Association of Jefferson County to supplement care of medically indigent cancer patients.

We have sixty-seven (67) educational chairmen in each of our counties who are responsible for contacting the lay public, showing films, making talks, distributing literature—all revolving around the 7 Danger Signals of Cancer.

We also have sixty-seven (67) campaign chairmen in charge of our April campaign.

With our very small staff it makes a tremendous amount of work for the state office.

The State Executive Director and State Representative travel all over the state keeping our program going.

We are endeavoring to keep our administration costs at the lowest possible level.

We would like again to call the attention of the physicians to the fact that the Cancer Society has available in its state office, for the use of doctors in Alabama, the following films:

Breast Cancer,
Gastro-Intestinal G-I,
Uterine Cancer,
Cancer—The Problem of Early Diagnosis,
The Exfoliative Cytologic Method in the Diagnosis of Gastric Cancer, and
Lung Cancer.

These films are available upon request, without any charge, to any doctor in the state. It is hoped they will be still further used by County Medical Societies during the year.

We would like to request that each County Medical Society show the Alabama Division film entitled *The Search* at one of its meetings. We feel that a better understanding of the work of the Cancer Society will result. This is a color film, nine minutes in length, and available from the state office.

A year's complimentary subscription to CA—A Bulletin of Cancer Progress has been given to each member of the State Medical Association.

The American Cancer Society's program has grown to monumental proportions. The correspondence alone takes a tremendous amount of time each day.

The American Cancer Society, Alabama Division, welcomes any help and suggestions from the physicians of Alabama as to how its program may better serve the people of this state.

Postgraduate Study

The same general plan previously followed through cooperation of the postgraduate seminar committee and clinical faculty of the Medical College of Alabama with the Association's committee and various medical assemblies has been followed throughout the year.

The following is a list of the meetings sponsored by the Postgraduate Committee:

Black Belt Postgraduate Seminar Society—

(Consisting of ten counties)

Subjects discussed during period—April 1, 1955–March 31, 1956:

June 16, 1955—Diarrheas; Recent Advances in Arthritis; Cardiac Arrhythmias.

Sept. 20, 1955—The Diagnosis of Congenital Heart Disease; Treatment of Congenital Heart Disease.

Marion County Medical Society—

(Consisting of five counties)

Subjects discussed during period—April 1, 1955–March 31, 1956:

Dec. 1, 1955—Newer Advances in the Management of Cancer of the Breast; Medical Disorders of Bones.

Jan. 5, 1956—Medical Ethics.

March 1, 1956—Diverticulitis; Endometriosis.

Total—Five assemblies—ten members of the faculty of the Medical College presented and discussed the above subjects.

It is evident that a varied number of important subjects have been presented to the membership of 15 counties throughout the year. It is the hope of the Postgraduate Committee of the Medical College of Alabama and the Association that more counties will form assembly groups and take advantage of the opportunities afforded for the high type of instruction that has been given to those participating in the program. Any county or group of counties that can guarantee an attendance of at least 15 physicians may have the advantage of this type of instruction by contacting Doctor James R. Garber, Chairman of the Seminar Postgraduate Committee of the Medical College of Alabama, who will gladly arrange for the organization of assemblies and speakers on subjects chosen by them.

RECOMMENDATIONS

It is recommended by the committee that the above type of instruction be continued throughout 1956–1957 and that, as previously done, the

Department of Public Health make available the sum of \$1,500.00 through the issuance of vouchers, which may be supplemented by funds of the Association not to exceed \$1,000.00 if expansion of the program demands further funds.

Financial Statement

Receipts by the Medical College of Alabama		
3/31/55 Balance on hand	Debit -	.50
Fees from medical assemblies...		90.00
Total		\$ 89.50
Disbursements by the Medical College of Alabama		
Postage		\$ 3.00
Long distance telephone call		1.25
Total		\$ 4.25
3/31/56 Balance on hand		\$ 85.25
Total		\$ 89.50
Agency Funds placed at disposal of committee through field vouchers by:		
State Department of Health		\$1,500.00
Field Vouchers for:		
Honoraria and travel		\$ 550.00
Secretarial services		\$ 420.00
Unexpended		\$ 530.00
Total		\$1,500.00

The committee desires to express its appreciative thanks to the participating lecturers, the members of the postgraduate seminar committee of the Medical College of Alabama and the various assembly groups for their interest and services; the State Health Officer, Doctor D. G. Gill, and the State Board of Censors for making available funds necessary for promoting the program

James R. Garber, M. D.,
Chairman

Robert F. Guthrie, M. D.
Ray O. Noojin, M. D.

Mental Hygiene

The Committee on Mental Hygiene wishes to call to the attention of the Association the following developments during the past year.

1. The growth of the Department of Psychiatry of the Medical College under the direction of Dr. Elmer Caveny. Dr. Caveny has procured a full-time staff of three psychiatrists, one resident, six voluntary part-time psychiatrists, and two psychiatric social workers. Dr. Caveny prompted the opening of thirty psychiatric beds at the Birmingham Veterans Administration Hospital and the assembling of a staff of two psychiatrists, a clinical psychologist, a psychiatric social worker, and seven nurses. He has developed a full-time psychiatric out-patient clinic, University Hospital. He has materially strengthened the psychiatric teaching program in each of the four years.

2. The committee expresses its appreciation to Mr. and Mrs. Joseph Smolian, Birmingham,

Alabama, through whose generosity the Medical College has established the Smolian Fellowship Foundation for the training of psychiatric residents.

3. The committee expresses its appreciation to the legislature for appropriations made to the Department of Psychiatry of the Medical College for training of psychiatric personnel, following recommendations of our Governor's Committee under auspices of the Southern Governors' Conference.

4. The committee has continued to urge Blue Cross-Blue Shield not to exclude nervous disorders from benefits. These disorders are included in the plans of some other states. We are advised by Blue Cross-Blue Shield that there is not the demand for such coverage by the subscribers or the physicians. We continue to seek your support in our efforts to have this needed coverage offered.

5. The committee has continued to consider the question of a written voluntary admission agreement for psychiatric patients. Such hospitals as the University, Hill Crest, and the Veterans Administration provide closed ward services on the implied voluntary acceptance by the patient. Where this is not acceptable to the patient, and enforced custody is required, our present commitment laws suffice. The State Hospitals do not now have the facilities to accept a voluntary group, in addition to those committed. The committee looks with favor on the proposition of voluntary admission but makes no specific recommendation at this time.

6. The committee wishes to call to the attention of the Association the increasing quality of the services provided by the Mental Hygiene Division of the State Health Department under the direction of Dr. John McKee. The clinical services by the Jefferson County Division of Mental Health, the Psychological Clinic of the University of Alabama, the Muscle Shoals Division of Mental Health, at Florence and Tuscumbia, the Mental Health Clinic of Tuskegee, and the Mental Health Section of the Montgomery County Health Department have been strengthened, as have the educational services of the central office.

7. The committee congratulates Dr. J. Wilbert Edgerton, Executive Director of the Alabama Association of Mental Health, on the progress of that Association. In addition to the associations in Jefferson, Montgomery, Mobile, Tuscaloosa, Lee, Etowah, Dallas, Chambers, and Talladega counties, and the Tri-City Region, Mental Health Associations have been established in Morgan, Pike and Madison counties. We urge you to affiliate with your local group.

8. The committee urges the Association to support the bond issue for capital expenditures for the State Hospitals at the November 6 elections. The bond issue is for \$4,000,000.00, to be matched with \$8,000,000.00 Hill-Burton funds. This is an unusual opportunity to strengthen the state hospital program.

9. The committee also thanks the many others, both individuals and groups, who have given unselfishly of their time, their talents and

their resources to the State Hospitals and other mental health work.

Jack Jarvis,
Chairman

F. A. Kay
J. S. Tarwater

Blindness and Deafness

The Committee on Prevention of Blindness and Deafness reports that the incidence of blindness and deafness was somewhat less this year than last. This is due to many factors but principally to continued good public health surveillance in the field of maternal and infant care and preventive medicine.

The incidence of retrolental fibroplasia has dropped considerably with the advent of compulsory oxygen control and restriction to all but the *in extremis* types of prematurity. The incubators should be followed with oxygen assay and their care entrusted to those capable of so evaluating, preferably the physician.

More and hazardous occupations have their employees in non-shatterable spectacles, thus the great reduction of eye injury in industry. This feature may well be carried over to the automobile along with the innovation of the safety belt as an aid to accident prevention.

Again, this year, Alabama Sight, Inc., the parent eye-care organization of the many Lions Clubs of Alabama, has contributed admirably to the indigent eye care of the state. However, with the changing economic times this load has lessened.

Local and national organized eye banks have made eye donor material available for Alabama where it is needed for corneal transplants.

Deafness is an ever-present problem. The increased number of aged people in our population brings with it increased incidence of hearing impairment. The new hearing aids balance-off this problem well. Congenital deafness is rare.

No new public health legislation in the prevention of blindness and deafness is needed at this time.

Karl Benkwith,
Chairman

Gayle T. Johnson
Geo. E. Johnson

Tuberculosis

The Committee on Tuberculosis met in Gadsden on March 17, 1956 at which time various aspects of the tuberculosis control problem as it relates to the state of Alabama were discussed in detail. This is intended as a further expansion of reports previously submitted to the State Medical Association by committees previously appointed. With reference to the mortality associated with this infectious disease, the committee submits the following statistics obtained from the Bureau of Preventable Diseases of the Alabama State Health Department for the year 1955. These are provisional figures, but presumed to be quite accurate.

Table I
Leading Causes of Death—Alabama

Cause	1955 (Provi- sional)		1954 (Final)		1949-1953 (Average)	
	No.	Rate	No.	Rate	No.	Rate
Heart diseases (including hypertension)	8,451	260.8	8,227	256.8	8,061	259.8
Vascular lesions	3,395	104.8	3,423	106.8	3,211	103.5
Cancer	3,291	101.6	3,134	97.8	2,907	93.7
Accidents	1,883	58.1	1,837	57.3	1,860	59.9
Pneumonia	786	24.3	814	25.4	1,001	32.3
Immaturity*	518	6.4	616	7.5	746	8.9
Diseases of arteries	515	15.9	484	15.1	391	12.6
Nephritis	501	15.5	561	17.5	714	23.0
Homicide	368	11.4	366	11.4	406	13.1
Congenital malforma- tions*	352	4.3	348	4.2	343	4.1
Tuberculosis	344	10.6	414	12.9	710	22.9

*Rate per 1,000 live births
Other rates per 100,000 population
Heart diseases, vascular lesions, nephritis and immaturity are not comparable to five-year average due to changes in coding procedures in 1949.

As was pointed out by the reports of previous committees the prevalence of tuberculosis is not declining in keeping with the decline of mortality. This tends to indicate at least a stationary case control problem, if not in fact an increasing case control problem, particularly when account is taken of the fact that a rapidly expanding elderly age group is that in which most new cases of tuberculosis are now being found.

Since the previous report was submitted, new facilities have been opened for the treatment of tuberculosis. In view of the fact that case isolation is one of the prime factors in controlling this disease, it would seem particularly important that these facilities be further added to as rapidly as possible so that the point can be reached at which legislation to compel hospitalization of sputum positive recalcitrant patients can be considered. Such legislation has never previously been attempted in this state because of simple lack of facilities, which would have served to make such legislation unenforceable. The value of such legislation is attested to by the fact that virtually all other states in the southeastern area have such statutes upon their books and actively enforce them. This, in a sense, creates a vacuum in the state of Alabama in that cases seeking to escape supervision tend to come to Alabama from these other states thereby contributing to our problem.

The new hospital facilities referred to above include the opening of a 152 bed facility, newly constructed at Gadsden in Etowah County to service District IV which comprises 10 counties in northeastern Alabama. At Mobile 6 counties comprising District VI organized and secured title to the previously federally owned facility known as the Marine Hospital. They proceeded to remodel this facility, and in December of 1955 opened it as a 100 bed tuberculosis hospital. At the time of this writing it is understood that both of the new facilities at Gadsden and Mobile are completely occupied. This is thought to demonstrate conclusively the need for these facilities. At the time of this report Sanatorium District II, centering at Tuscaloosa, has completed organization and has secured an allotment of Hill-Burton funds for the construction of a 150 bed facility at Tuscaloosa. Final plans for this are now in the process of being drawn, and

it is anticipated that construction will be undertaken in the very near future.

The committee anticipates the need for further construction in District III, which comprises Jefferson County, and in District V, which is composed of 26 counties constituting roughly the southeastern one-fourth of Alabama. The need at Jefferson County, as envisioned at this time, seems to be for a new bed space to be obtained by addition of a wing to the present building. The need in District V would seem to represent a considerable expansion of bed space available for the treatment of colored patients. The need for white bed space in this area appears at the time of this writing to have been met. This district is currently served by two facilities, namely, the Batson Memorial Sanatorium at La-Fayette and the Montgomery Sanatorium at Montgomery. There are now 219 beds available in this district to serve a total of 499 cases and a population of 838,500.

It is considered possible that with the completion of these facilities the demand for bed space may have been met. Anticipating therefore the possibility that legislative action to compel hospitalization of active cases might be feasible within the foreseeable future, it is respectfully recommended that a committee be appointed to study the action other states in this area have taken to meet the problem of recalcitrant patients, and that this committee be requested to report back to the Board of Censors concerning its findings. The last regular session of the Legislature of Alabama recognized clearly the problem of tuberculosis hospitalization and this assembly adopted enabling legislation and appropriated sufficient funds to provide \$6.00 per patient day toward the cost of supporting patients in the sanatoria of Alabama. The total appropriation exceeded \$1,500,000.00 and greatly facilitated the management of the hospitals from the business standpoint and should serve to make available more freely to all patients complete care for their disease irrespective of the county from which they originate, and irrespective also of their personal financial status. All of the existing tuberculosis hospitals in Alabama are now attempting to conform to a maximum per diem cost of \$6.00 per patient day. All efforts consistent with sound business practices have been, and will continue to be, made to improve the efficiency of operation of the hospitals to eliminate charges above a flat rate of \$6.00 per patient day, and also to eliminate charges for auxiliary services rendered in connection with the treatment of tuberculosis.

As was pointed out in the report of the previous committee, operation of the State Health Department Laboratories and its branches continues to be hampered for various reasons, and the availability of routine sputum cultures for tubercle bacilli continues to be somewhat restricted though not as much so as was noted one year ago. It is urged that every effort consistent with existing financial and personnel problems be exerted to make routine culture reports available to clinicians attempting to control this disease in Alabama. The marked lack of reliability of simple smears of sputum specimens is thought to impose great difficulty in diagnosis

for the Health Departments and clinicians in Alabama to overcome.

The committee takes cognizance of the increasing feasibility and increasing prevalence of the so-called home care of tuberculosis. The committee considers it of the utmost importance to stress the importance of "the total push" with regard to initiation of therapy. There is no evidence to indicate that complete bed rest is still not required in the treatment of this disease. Moreover, there is indisputable evidence of the transmission of disease from the sputum-positive case to the uninfected contact if careful isolation is not insisted upon, and the committee feels that isolation in many homes in this state could, at the best, be the merest figment of one's imagination. It is felt that failure to isolate cases during home care is, by and large, a deplorable situation and one to be avoided at all cost. Chemotherapy is obviously necessary in the management of any of these cases of tuberculosis, and in this connection it is urgently advised that when chemotherapy is used that it be so-called combined chemotherapy, in which two of the tuberculostatic compounds are used in conjunction. It is urgently pointed out also that chemotherapy, once initiated, should be continued for a period of from 1 to 2 years without interruption. The value of surgical therapy, both resection and surgical collapse, is undoubted. The popularity of pneumothorax, in particular pneumothorax, is doubted in some quarters, but there continues to appear in the literature evidence of the value of pneumoperitoneum in the closure of cavities when used in conjunction with bed rest and chemotherapy. The signal importance of this material is thought to warrant its inclusion as a reference in this report.¹

Table II

Transactions of the 14th Conference on the
Chemotherapy of Tuberculosis

TOTAL CASES				X-Ray Change*			Cavity Change	Sputum
				M-M %	S-O %	W %	% Cavity Closed	% With Neg. Cult.
4 Mo.	With PNP	42	35 (83)	7 (17)	0 (0)		21 (50)	39 (93)
	No. PNP	31	16 (52)	15 (48)	0 (0)		3 (10)	24 (77)
8 Mo.	With PNP	25	24 (96)	1 (4)	0 (0)		17 (68)	25 (100)
	No. PNP	16	11 (69)	5 (31)	0 (0)		6 (37)	12 (75)
12 Mo.	With PNP	12	12 (100)	0 (0)	0 (0)		10 (83)	12 (100)
	No. PNP	7	5 (71)	2 (29)	0 (0)		3 (43)	7 (100)

*M-M—Moderate or marked x-ray improvement.

S-O—Slight x-ray improvement or no change.

W—X-ray evidence of relapse.

It is anticipated, however, that there will continue to be a gradual lessening of load in the outpatient pneumo refill clinics of the state, and it is proposed that the diminishing load and consequent savings might well be used by rebudgeting to increase the case finding programs of the State and County Health Departments. The committee regards with alarm the tendency in some quarters to initiate therapy on a supposed diagnosis of tuberculosis when bacteriologic or clinical confirmation of x-ray impressions have not been obtained. This is thought to be an ex-

tremely important point and one that has been overlooked in some quarters. As in any disease, the proper diagnosis is of extreme importance, and a label of tuberculosis placed upon a patient can perhaps be an irrevocable handicap once chemotherapy has been initiated and the possibility of obtaining reliable bacteriologic studies has thereby been destroyed.

The status of BCG vaccination continues about as previously reported. It is recommended for use in tuberculin-negative medical students, nurses, laboratory personnel, and family groups in which unusual and unavoidable exposure to viable tubercle bacilli can be anticipated, but only in these groups and then only under proper safeguards to prevent the concomitant development of a naturally acquired primary infection during the process of BCG vaccination.

The committee desires also to bring the attention of the Association to the resurgence of popularity of tuberculin testing which is prevalent in many quarters of this country at this time. This simple technique needs to be much more frequently used as it can be of extreme value in differential diagnosis and in some instances in mass surveys for the direct purpose of finding new cases.

The committee wishes to acknowledge and express thanks to the Bureaus of Preventable Diseases and Vital Statistics of the Alabama State Health Department for the statistics quoted above.

RECOMMENDATIONS

1. That the state subsidy program to support patients in the tuberculosis sanatoria of the state be maintained at the present level of virtually full support. In this connection it is recommended that the various sanatoria standardize their cost as near the \$6.00 per patient day authorized by the Legislature as possible, and that this be regarded as an all-inclusive cost with the single exception being cases covered by insurance which can pay all or part of the cost of hospitalization.

2. Funds saved from the diminished use of outpatient pneumo refills service should be re-channelled into use for continuation of outpatient chemotherapy following hospital discharge and for a stepped-up case finding program.

3. That the Association give careful consideration to the concept that recalcitrant patients who refuse hospital care forfeit their right to therapy free of charge on an outpatient basis by virtue of their refusal to accept hospital care at public expense to the point of maximum benefit.

4. That an organized and increased program of rehabilitation for known tuberculous patients be developed with reasonable promptness.

5. That facilities of the State Health Department Laboratories be expanded so as to accomplish routine sputum culturing for tubercle bacilli on all specimens submitted.

Robert K. Oliver,
Chairman

W. J. Tally

A. J. Viehman

1. Schwartz & Moyer; Transactions of Veterans Administration 14th Joint Conference on the Chemotherapy of Tuberculosis (Personal communication).

Physician-Druggist Relationships

At the onset this committee wishes to admit that too little effort has been expended and too few results have been obtained. However, some thought has been given to this important phase of our Association's work and some plans have been considered.

The committee feels and recommends that the following suggestions should be approved and adopted by the State Medical Association:

That all County Medical Societies have at least one joint meeting each year with the druggists of the county. This would preferably be a social meeting so that the doctors and druggists could discuss their problems, get better acquainted, and have a good time together.

That all doctors have a friendly talk with their druggist and attempt to persuade him against selling prescription items over the counter, especially barbiturates, amphetamine items, antibiotics and injectables.

At the convention of the Alabama Pharmaceutical Association in 1955, fifty-seven (57) resolutions were proposed. This committee has studied these and wishes to bring certain pertinent ones to your attention with comments and recommendations. (The resolutions that follow will be shown in accordance with the number as given by the Alabama Pharmaceutical Association in its report.)

(7) That APA express vigorous opposition to physician-owned clinic pharmacies or participation of any physician in remuneration from same as grossly unethical, unwarranted and detrimental to good medical and pharmaceutical service, and that the Alabama Medical Association be prevailed upon to construe officially the pertinent section of its Code of Ethics so as to condemn establishment of such pharmacies by its members.

It is realized that the establishment of such pharmacies will not promote the best relationship with druggists in many cases and should be discouraged. However, the committee feels that such pharmacies should be approved providing they meet with the public health laws on health and sanitation and providing that a licensed registered and ethical pharmacist is on duty at all times while the pharmacy is in operation.

(8) That APA vigorously condemn, as highly dangerous to the public welfare, the dispensing of drugs and medicines by nurses, office girls and clerical employees in physicians' offices, hospitals, nursing homes and other places where competent pharmaceutical services are required, and urge the Board of Pharmacy to invoke the law in such practices.

The Committee concurs in this resolution and recommends approval.

(23) That APA emphasize to its members that section of its Code of Ethics which condemns the practice of collusion between pharmacist and physician on division of fees or rebates and Board of Pharmacy define such practice as reprehensible conduct and those found guilty have store permit revoked.

The committee recommends approval of this resolution.

(29) That APA go on record deploring practice of some physicians telling their patients what the Rx should cost, since this is not within the province of the doctor to know any more than it is for the pharmacist to tell the patient, or customer, what the doctor will charge for his diagnosis and treatment of their ills.

The committee feels that a doctor should not attempt to tell the patient exactly what the prescription should cost, but the committee feels that the doctor should be allowed to warn the patient if he feels that the cost of filling the prescription would be unusually high.

(32) That APA go on record deploring the practice of some physicians in telling the patient to ask the pharmacist for a Rx item without giving an Rx for the item when it is an Rx legend drug covered under the Durham-Humphrey Law.

The committee recommends approval of this resolution.

(33) That APA go on record favoring closer cooperation between physicians and pharmacists through their local, state and national associations.

The committee strongly approves this resolution.

(38) That APA go on record condemning the practice of doctors who request pharmacists to label Rx indicating trade name on Rx, as being unethical practice and request the Alabama Medical Association to give this resolution their favorable consideration.

The committee favors this resolution.

(44) That APA go on record as opposed to use of generic terms in the writing of prescriptions by physicians.

Approved by committee.

(48) WHEREAS, We are experiencing epoch-making scientific progress in the control of one of man's most dreaded diseases, namely, poliomyelitis through the discovery and development of the Salk vaccine, and

WHEREAS, The announcement of the Salk polio vaccine has created public apprehension and concern, and some controversy on the availability and supply of the vaccine, and

WHEREAS, Indications have been announced concerning adequate commercial supply of the Salk vaccine in the near future, therefore be it

RESOLVED, by APA in convention assembled, That it will cooperate in every way possible with the Department of Health, Education and Welfare through the proper procedures and with the government of Alabama in the committee procedure at the state level as recommended by HEW for the proper distribution of Salk vaccine, and be it further

RESOLVED, That all Salk vaccine released for commercial distribution be distributed through established retail drug channels either by direct sale to the retailer or through wholesale distributors, and that such supply of Salk vaccine be

sold only on the order of, or Rx of a physician, or other agent, or agency authorized to administer Salk vaccine, and be it further

RESOLVED, That a copy of this resolution be sent to the Governor of Alabama, the State Department of Health, the Alabama Medical Association and the Department of Health, Education and Welfare, NARD, APHA and President Eisenhower.

The committee feels that there is no reason to distribute the Salk vaccine differently from any other prophylactic vaccine.

(49) That APA in convention assembled go on record expressing congratulations and highest commendation to Dr. Salk and his co-workers for their epoch-making contribution to the health and welfare, not only of this nation but the entire world, through the discovery and development of the new Salk vaccine which is expected to control the dread disease poliomyelitis.

The committee feels that the state medical association should join the APA in this expression of congratulations and commendation.

(50) That APA strongly oppose any move that might lead to a reduction in the educational requirements for licensure of any profession of the healing arts.

The committee approves.

A. J. Treherne, M. D.,
Chairman

B. Frank Jackson, Jr., M. D.
R. C. Bibb, M. D.

Anesthesiology

Anesthesiology in the state continues to make steady progress. There are at present 20 physicians doing full-time anesthesiology. These physicians are all qualified and recognized by the American Society of Anesthesiology. The need for more men of this caliber is ever increasing. During the past year two physicians located in our state. The Anesthesiology Placement Service, which was set up last year, will be happy to give any information to any physician interested in locating in Alabama. We hope that more and more will be attracted to our state.

A meeting of the State Society of Anesthesiology was held on April 18, 1955, in connection with our state medical meeting. A revamping and reorganization of our society was made at this meeting with the election of new officers. It is the plan and desire of this society to hold an annual meeting in connection with the state meeting. The outlook for more than an annual meeting is very good.

The Jefferson County Society of Anesthesiology which was organized in April of 1955 made outstanding progress during the past year. There are ten active members in this society. Physician-anesthetists in this area were invited guests to our quarterly meetings, along with the residents in anesthesiology at the two institutions in Birmingham.

During the past year one physician received part-time training at the Lloyd Noland Hospital.

His service will be of great value to his community and associates by having made himself available for this limited training. The committee would like to extend an invitation to other physicians in the state who would be interested in this part-time training. The Medical College of Alabama and the Lloyd Noland Hospital offer this service. Needless to say, a full-time residency program is also offered at these institutions.

It has been called to the attention of this committee that there are individuals in the state without an M. D. degree who are practicing anesthesia on a private basis, billing the patients for their service. This unlawful practice is being thoroughly checked by the committee.

Alfred Habeeb, M. D.,
Chairman

Alice McNeal, M. D.
W. P. May, M. D.

Liaison, UMW Medical Care Program

This report is in the form of a resolution which the committee recommends be adopted by the State Association, because it feels, after long and careful study and consultation with other members of the medical profession who have had experience with this program, that it should appreciably improve medical care afforded to beneficiaries of the Fund.

WHEREAS, Administrators of the United Mine Workers Welfare and Retirement Fund have repeatedly stated their primary objective is to obtain the best medical care obtainable at a reasonable cost for beneficiaries of the Fund, and

WHEREAS, While a high standard of care has been obtained in Alabama, nevertheless, problems and misunderstandings have and may possibly continue to arise here as they have in other mining states relating to patient choice of physicians, and methods of selecting and paying participating physicians, some such questions having been recently raised locally by some representatives of the beneficiaries and by some physicians, and

WHEREAS, The Medical Association of Pennsylvania has recently obtained an agreement with the administrators of the Fund which seems to be a fair approach and will help solve some of the problems on both sides, and

WHEREAS, Members of the medical profession in this state are desirous of and have an obligation to see that beneficiaries of this Fund, as well as other similar funds, receive high quality medical care and have a responsibility to take the necessary steps to guard the Fund against abuses relating to unnecessary hospitalization, prolonged hospital stays, and unnecessary surgery, now, therefore, be it

RESOLVED, That the Medical Association of the State of Alabama adopt the following principles which will be a guide in seeing that beneficiaries of the Fund receive good medical care which is their right, and that the State Board of Censors be authorized to arrange agreement with the medical service of the United Mine Workers, Welfare and Retirement Fund embodying the

following principles; with the State Committee on Medical Care for Industrial Workers being in an advisory capacity to the Board of Censors:

It is agreed that in those cases where the Fund desires to make changes in basic procedures or policy in the operation of the Fund, such proposals will be initially presented at the state level to the Board of Censors. Under such provision the Area Medical Administrator would present the matter to the Board with the reasons for the action contemplated. The Board of Censors might either state its position forthwith or defer action pending referral to the State Committee on Medical Care for Industrial Workers and/or to the county Committee on Medical Care for Industrial Workers for expression of their views. Consideration at appropriate levels would thereby be assured, and the final action taken at the state level would reflect the judgment of all, based upon full knowledge of the facts and the reasons for the changes contemplated. An added advantage would be the opportunity for alternate proposals which such procedure would afford. In the event that agreement with the medical service of the Fund could not be reached at the state level, a summary of the most essential facts developed in the course of this procedure, with the arguments for and against the changes under consideration, would greatly facilitate the deliberations of the Committee on Medical Care for Industrial Workers, of the Council on Medical Service and the Council on Industrial Health of the American Medical Association to which the matter would then be referred.

It is agreed that the Medical Association of the State of Alabama will recommend that in those hospitals where committees dealing with medical or surgical audits already exist, these functions be expanded to the status of full medical audit committees as defined by the Joint Commission on Accreditation of Hospitals and to include the evaluation of the quality of medical service provided in all departments of the hospital; the review of hospital admissions and length of stay, including their necessity; the necessity of procedures carried out; the general adequacy of patient care including medically indicated consultations or referrals. These functions may be carried out by the State Board of Censors or delegated to the Liaison Committee as a fact finding committee with a report to the Board of Censors for action. In those hospitals not having medical audit committees, it is recommended that a committee with the aforementioned functions be formed as soon as practicable.

It is the duty of all physicians, including those employed by the Fund, to expose incompetent, corrupt, dishonest or unethical conduct on the part of members of the profession. In such instances members may be charged with violation of the Principles of Medical Ethics as set forth by the American Medical Association.

Organized medicine does not concede to a third party the prerogative of passing judgment on the treatment rendered by physicians, including the necessity of hospitalization, length of stay, and the like. It is the responsibility of organized medicine to take the initiative in searching out abuses and instituting measures for their cor-

rection. The medical service of the Fund shall cooperate wholeheartedly in providing information to the proper committees of hospital staffs and liaison committees at local and higher levels to aid in the solution of difficulties of this character.

It is to be agreed that any physician who wishes to be included in the list of participating physicians shall apply to the Area Medical Administrator, giving his qualifications and stating the category in which he desires to be listed. Such application shall be sent to the Area Medical Administrator with an informational copy to the county Committee on Medical Care for Industrial Workers. In the event that his application does not receive favorable action, he may appeal to the county Committee on Medical Care for Industrial Workers and/or the State Committee on Medical Care for Industrial Workers, which will deal with the matter according to the procedure outlined later in these agreements. In those cases reviewed by these groups, decisions recommending that a physician should be listed shall include the special category, if any, in which the group feels the individual should be listed. Such recommendations shall be accompanied by adequate and valid supporting data.

It is to be agreed that the general format of the participating list will be of the type similar to that now printed by the Area Medical Administrator. Each listed physician shall be specifically designated either as a specialist, a general practitioner, or other appropriate designation.

It is to be agreed that the number of beneficiaries, however small, treated by a physician will not in itself be considered as a justifiable cause for removing a physician from the participating list. It is also to be agreed that in addition to violation of the Principles of Medical Ethics such procedure as unnecessary hospitalization, undue length of stay, unnecessary surgery, services of an inferior quality, and the like shall be justifiable cause for removing a physician from the list. Those grieved by such action have the right to appeal through the procedure contained herein.

The Medical Association of the State of Alabama, in order to insure a high standard of medical care as determined by medical audit committees, agrees to adequate consultation after hospital admission. Further consultation, either before or after hospital admission, is the third party prerogative for just cause, such as recurrent admissions, repeated referrals, prolonged medical care, and excessive hospital stay.

For the time being, it is to be agreed that individual physicians shall have the right of decision as to the method of payment for his services without jeopardizing his relationship with the Fund. It is also to be agreed that since many physicians believe that the fee for service method is the type of payment most conducive to good medical care, and since the American Medical Association is at present reviewing methods of payment for physicians' services in such programs, that this matter remain open and subject to later amendment.

Should either party become dissatisfied with such an agreement in whole or in part, he shall request a meeting with the other party to discuss points of difference. Such meetings shall be held within thirty days of the request. If the points of difference cannot be resolved, then that portion of the agreement affected thereby shall be considered as inoperative until such differences are resolved to the satisfaction of both parties.

The liaison procedure shall be as follows:

1. The Area Medical Administrator, individual physicians, hospital staffs, and other local groups shall make every effort to reach a satisfactory agreement on controversial matters that may arise. The Fund maintains the right to suspend individual physicians temporarily for cause.

When a satisfactory solution cannot be reached, or in the case of the temporary suspension of a physician from the participating list, either party shall have the right of appeal to the

(a) County Medical Society Committee on Medical Care for Industrial Workers. This committee shall render an advisory opinion within sixty days, unless for valid reasons, agreeable to both parties, a time extension is thought to be necessary. If necessary, the judicial body to receive the deliberations of this committee shall be the County Society Board of Censors. If no satisfactory solution is reached, then either party shall have the right to appeal to the

(b) State Committee on Medical Care for Industrial Workers. This committee shall render an advisory opinion within thirty days, unless for a valid reason, agreeable to both parties, a time extension is thought to be necessary. If necessary, the judicial body to receive the deliberations of this committee shall be the State Board of Censors. The State Committee on Medical Care for Industrial Workers shall be composed of seven members on a revolving membership basis elected by the State Association at its annual meeting. If no satisfactory solution is reached, then either party shall have the right to appeal to the State Board of Censors.

(c) State Board of Censors. This body shall render an advisory opinion within thirty days, unless for valid reason, agreeable to both parties, a time extension is thought to be necessary. If no satisfactory solution is reached, then either party shall have the right to appeal through appropriate channels to the Committee on Medical Care for Industrial Workers of the American Medical Association.

(d) In all cases appealed to a higher echelon, informative copies of the actions taken and/or charges made shall be forwarded to the next higher echelon of liaison by the Area Medical Administrator, the individual physician, or the liaison group taking the action and/or filing the charges.

2. When changes in basic procedure are involved, the Area Medical Administrator will present the matter to the State Board of Censors, with his reasons for the action contemplated. This Board will either state its position forthwith or defer action for not longer than thirty days.

In the event that agreement with the medical service of the Fund cannot be reached at the state level, a summary of the essential facts developed in the course of this procedure, with the arguments for and against the changes under consideration, will greatly facilitate the deliberations of the Committee on Medical Care for Industrial Workers of the American Medical Association, to which the matter would then be referred.

3. The Medical Association of the State of Alabama will recommend to the County Medical Societies that each County Medical Society Committee on Medical Care for Industrial Workers consist of three or five physicians on a revolving membership basis, with each physician serving for a period of three or five years, with the senior member acting as chairman. One member will be designated as secretary and accurate records of the meetings will be kept on file. The County Medical Society will, where indicated, on the basis of the size of its total membership, determine whether the committee should consist of three or five members. The Medical Association of the State of Alabama will recommend that all County Medical Society Committees on Medical Care for Industrial Workers be elected by the County Medical Society as a whole rather than be chosen by appointment.

Although the principles enunciated herein indicate by phraseology that they are applicable in relationship between the United Mine Workers of America, Welfare and Retirement Fund, and the medical profession in Alabama, it is recommended by the State Association that these principles shall also be applicable in its relationship to other groups and situations comparable to those pertaining to the Fund.

E. B. Robinson, Jr.,
Chairman

J. E. Wood
T. J. Payne
H. E. Simon
L. H. Hubbard
A. C. Jackson

Committee of Publication

Douglas L. Cannon, Chairman

The monthly circulation of the Journal of the Association on December 31, 1955 was 2150—125 more than a year ago. Cost of publishing and distributing was \$16,256.74. Receipts from advertising, non-member subscriptions and other sources were \$17,165.85. Of this amount, \$1,050.51 was a refund of sales tax that should not have been paid by a publication of the nature of our Journal, and which was returned through the good offices of the Brown Printing Company because of its negotiations with the State Department of Revenue. Without the refund, there would have been a small deficit in Journal operations.

The Committee of Publication expresses its gratitude to all who have contributed papers to the Journal.

Cost of printing and mailing the 1955 Transactions to the members of the Association was

\$1824.86, a part of which (\$135.50) was recovered through sale of rosters.

SPECIAL COMMITTEES

Insurance

Two years ago a committee was appointed by the President of the Association to make a study of the relative merits of various health and accident (income protection) and liability insurance programs in the hope of developing group plans to serve the needs of the members of the Association. Proposals were received from a number of insurance companies offering these types of insurance. After considerable study and negotiation it was decided the needs of the members of our Association were best met by group plans offered by Liberty Mutual Insurance Company of Boston.

Several months ago a questionnaire was mailed to every member of the Association asking if he was in favor of group plans of these types of insurance for the members. On only one mailing more than 51 per cent of the entire membership answered in the affirmative.

Shortly before this meeting, a brochure, prepared by Liberty Mutual, describing the major aspects of the proposed group plan on health and accident insurance, was mailed to every member of the Association for his information. A booth has been set up in the exhibit hall where insurance company representatives are available to answer any questions.

A group plan of physicians' liability (malpractice) insurance has also been submitted by Liberty Mutual. The committee is now studying and negotiating this plan. It will most likely be submitted to the members in the near future.

The Insurance Committee recommends:

1. That this Association approve group programs of both health and accident and liability insurance for its members, these programs to be controlled by Master Policies held by the Association.
2. That the State Association's Committee on Insurance be continued. That this committee consist of three members to be appointed by the President of the Association. One member for a term of 3 years, one for 2 years and the other for 1 year. Thereafter, one member shall be appointed each year.
3. That the Association request the presidents of the county societies to appoint similar insurance committees at the county level.
4. That the duties of the insurance committees at both the state and county levels be as follows:
 - a. To consider, act upon or make recommendations upon any insurance problems coming before the State Association or the County Medical Societies.
 - b. To review, if called upon, applications for malpractice insurance, and to make comments on the fitness and integrity of the applicants.
 - c. To provide expert medical testimony if it is deemed advisable by the Association or the Company.
 - d. To review, together with a representative

of the insurance company and the insured, any malpractice claim made against a physician protected by the Master Policy and make recommendations as to its disposition. In case a claim is contested in court to give maximum assistance in working out the defense.

A brochure, prepared by Liberty Mutual, giving the salient features of the proposed group plan on health and accident insurance for the members of the Association has been furnished all members of the Association.

J. O. Morgan, M. D.,
Chairman
Victor T. Hudson, M. D.
Ben M. Carraway, M. D.

REPORTS OF OFFICERS

Report of the Secretary-Treasurer

Douglas L. Cannon

MEMBERSHIP:

This is the thirty-third consecutive annual report I have rendered you, the first in 1924 in the administration of Dr. W. W. Harper. In that year the membership of the Association was 1601. Now it is 1965.

DEATHS:

In the twelve-month period ending April 18, 1956, forty one doctors of Alabama have died, including a past president of the Association (Dr. W. G. Harrison), and a former member of the State Board of Censors (Dr. D. T. McCall). The complete obituary record is as follows:

Allen, W. E.	Sweet Water
Anderson, William	Glencoe
Beasley, J. W.	Geneva
Blake, Theodore M.	Mobile
Bragg, E. G.	Elba
Brooks, O. J.	Huntsville
Cammack, K. R.	Grove Hill
Campbell, V. O.	Billingsley
Carter, H. R.	Birmingham
Chisolm, R. P.	Selma, Route 4
Compton, W. W.	Black Mountain, N. C.
Cowden, A. M.	Mobile
Edwards, D. B.	Tyler, RFD
Gibson, A. M.	Gastonsburg
Hale, R. E.	Bellamy
Hamil, J. Y.	Decatur
Harris, F. W.	Birmingham
Harrison, W. G.	Birmingham
Hill, J. F.	Montgomery
Huey, T. F.	Anniston
Jones, C. T.	Newville
Jones, W. C.	Mobile
Kincaid, J. L.	Maplesville
Kirk, A. A.	Tuscaloosa
Ladas, H. E.	Mobile
Mason, D. A.	Selma
McCall, D. T.	Mobile
McLain, A. D.	Salem
Meeker, W. R.	Mobile
Mitchell, J. I.	Haleyville
Nettles, T. E.	Monroeville
Price, E. S.	Tuscaloosa
Ragsdale, M. C.	Bessemer
Sanders, S. R.	Moulton
Sellers, I. J.	Birmingham

Stough, W. V.	Montgomery
Tankersley, William	Hope Hull
Thompson, Charlton	Tuskegee
White, A. M.	Hartselle
Wilkerson, L. B.	Shorter
Wilson, D. W.	Ft. Payne

THE FIFTY YEAR CLUB

Certificates of distinction are to be awarded twenty-two physicians of the State who have practiced their profession for fifty years, and the presentations will be made tomorrow morning immediately after the Jerome Cochran Lecture. Those who are to receive the certificates are as follows:

Herschel W. Bass	Gadsden
Walter H. Bell	Dozier
W. L. Box	Vernon
John T. Burch	Hartselle
Elkanah G. Burson	Furman
Wilson T. Cantrell	Mentone
James O. Foster	Luverne
Thomas H. Gaillard	Magnolia
Paul E. Gwin	Jasper
Charles P. Hayes	Elba
Forest Lee Hester	Coatopa, RFD
Dorman M. Hicks	Cottonwood
Robert L. Hill	Winfield
Miles P. Hughes	Gadsden
W. L. Marshall	Langdale
Robert L. Meharg	Alexandria
H. R. Morris	Birmingham, Route 1
George E. Nye	Scottsboro
George A. O'Connell	Anniston
Charles A. Olivet	Talladega
Naomi P. Underwood	Russellville
Reginald Van Iderstine	Daphne

Dr. William Anderson of Glencoe was to have received his certificate at this meeting. However, last summer his son, Dr. William O. Anderson of Gadsden, asked that the certificate be awarded then, since his father was failing rapidly. The request was granted. Dr. Anderson lived for only a short time thereafter.

PRESIDENTIAL APPOINTMENTS:

Drs. J. Paul Jones and D. G. Gill were appointed delegate and alternate, respectively, in the House of Delegates of the American Medical Association, their terms to expire December 31, 1957.

Other appointments were made as follows to the committees of the Association: Medical Service and Public Relations—S. W. Windham and M. Vaun Adams; Mental Hygiene—Jack Jarvis; Maternal and Child Health—Hughes Kennedy, Jr.; Cancer Control—John Day Peake; Prevention of Blindness and Deafness—George E. Johnson; Postgraduate Study—A. S. Dix; Physician-Druggist Relationships—R. C. Bibb; Anesthesiology—Alice McNeal; Tuberculosis—Robert K. Oliver; Industrial Medicine—C. L. Yelton.

STATUS OF COUNSELLOR'S-ELECT

Last year, seven members were elected Counsellors, namely, Maurice E. Barrett, E. Byron Glenn, M. H. Lynch, John E. Moss, William T. Snoddy, Charles L. Spann and N. A. Wheeler, Jr. They have qualified as required by the

Constitution of the Association and are to be added to the Roll of Active Counsellors when the revision of the rolls is made on Saturday morning.

OFFICERS TO BE ELECTED

Officers to be elected at this session are a President Elect, a Vice-President for the North-western Division to succeed Dr. T. J. Payne, Jr., whose term has expired, and two Censors for five years to succeed Drs. J. Paul Jones and John W. Simpson whose terms expire this year.

Fifteen Counsellors are to be elected also: From the 1st Congressional District, 3. The second terms of seven years of W. J. Barber and G. O. Segrest have expired. J. H. Baumhauer's first term of seven years has expired. 2nd District, 3. E. F. Leatherwood has resigned because of ill health. C. G. Godard's second term of seven years has expired. J. M. Barnes' first term of seven years has expired. 3rd District, 1. E. T. Brunson is to be elevated to Life Counsellor. 6th District, 2. R. C. Hill is to be elevated to Life Counsellor. W. P. Baston has resigned. 9th District, 6. J. A. Meadows has resigned. The second terms of seven years of C. N. Carraway, H. Earle Conwell, John W. Simpson and Frank C. Wilson have expired. The first term of seven years of S. Sellers Underwood has expired.

APPOINTMENTS TO BE MADE

Committees presenting vacancies because of expiration of term of members are Medical Service and Public Relations (J. O. Finney and Haynes Byrne), Mental Hygiene (Frank A. Kay), Maternal and Child Health (T. C. King), Cancer Control (W. Nicholson Jones), Blindness and Deafness (Karl Benkwith), Postgraduate Study (A. J. Treherne), Physician-Druggist Relationships (B. Frank Jackson, Jr.), Anesthesiology (Alfred Habeeb), Tuberculosis (W. J. Tally), Industrial Medicine (W. G. Thuss), Liaison, UMWA Medical Care Program (A. C. Jackson), Insurance (B. M. Carraway), Coroner System (I. M. Wise, Mobile), AMEF (E. L. Gibson).

It will be the responsibility of the next President to make appointments to fill these vacancies and to name a delegate and an alternate to the American Medical Association for terms of two years to succeed Drs. E. Bryce Robinson and B. W. McNease whose terms will expire December 31, 1956.

ASSOCIATION FINANCE

At the last meeting I reported to you that seven \$500 U. S. Savings Bonds owned by the Association would mature July 1, 1955, and six on January 1, 1956; and I asked authority to invest the proceeds from these bonds in other U. S. Savings Bonds. The request was granted and the transactions consummated. The first of them is reflected in the audit constituting a part of this report. The second, having been an event of 1956, will not be accounted for by the auditor until the books of the Association have been examined for the year ending December 31, 1956.

Four \$500 bonds will mature June 1, 1956, and authority is sought to invest the proceeds from them in purchasing other U. S. Savings Bonds.

All the bonds of the Association are in the Association's deposit box at the First National Bank, Montgomery.

The accounts of the Association for the year 1955 have been audited by Crane, Jackson and Wilson, Certified Public Accountants of Montgomery, and the audit constitutes the concluding pages of this report.

To the Officers and Members,
The Medical Association of the State of Alabama,
Montgomery, Alabama.

Gentlemen:

We have examined the cash accounts of the Treasurer of The Medical Association of The State of Alabama for the calendar year 1955, and have prepared the following statements therefrom:

Exhibit "A": Summary Statement of Cash Receipts and Disbursements for the Calendar Year 1955.

Exhibit "B": Statement of Cash Disbursements for the Calendar Year 1955.

Exhibit "C": Securities Owned at December 31, 1955.

Our examination included the tracing of all recorded cash receipts to the bank statements, and the vouching of all returned cancelled bank checks to the record of disbursements. Cancelled bank checks were also examined as to amount, signature and endorsement. Records of receipts and disbursements were proved for mathematical accuracy.

Securities owned by the Association, detailed in Exhibit "C", were verified by physical examination on January 28, 1956, at the safety deposit vault of the First National Bank of Montgomery.

Respectfully submitted,
Crane, Jackson and Wilson
By H. C. Crane, C. P. A.

Jan. 30, 1956

EXHIBIT "A"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SUMMARY STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1955

Cash Balance—January 1, 1955:

Checking Account—First National Bank	\$12,415.41	
Savings Account (Association)—First National Bank	2,528.45	
Savings Account (MS & PRC)—First National Bank	3,017.51	\$17,961.37

Cash Receipts:

Association:

County Dues	\$25,507.50	
Counsellors	2,345.00	
Refunds for Annual Session Expense	184.07	
Sale of Association Rosters	135.50	
Interest on Savings Account	25.34	\$28,197.41

Journal:

Advertising	\$15,188.92	
Refund of Sales Tax	1,050.51	
Cooperative Medical Dividend	791.02	
Non-Member Subscriptions and Sales	135.40	17,165.85
American Medical Association Dues		12,287.50

Medical Service and Public Relations Committee:

Refunds	\$ 1,152.65	
Interest on Savings Account	30.24	1,182.89
		\$58,833.65

Cash Disbursements (Exhibit "B"):

Association	\$ 6,143.18	
Medical Service and Public Relations Committee	24,348.91	
Journal	16,256.74	
American Medical Association Dues	12,287.50	59,036.33
<i>Excess of Disbursements over Receipts</i>		<i>\$ 202.68</i>

Cash Balance—December 31, 1955:

Checking Account—First National Bank	\$12,157.15	
Savings Account (Association)—First National Bank	2,553.79	
Savings Account (MS & PRC)—First National Bank	3,047.75	\$17,758.69

EXHIBIT "B"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
STATEMENT OF CASH DISBURSEMENTS
FOR THE YEAR ENDED DECEMBER 31, 1955

Association:

Salary—Douglas L. Cannon	\$	600.00	
Printing and Mailing 1955 Transactions		1,824.86	
Annual Meeting Expenses:			
Guest Speakers	\$	727.56	
Blue and Gray Room Rental		300.00	
Printing and Mailing Programs		297.59	
Badges		126.40	
Film Equipment and Projectionist Expense		43.50	
Lettering Certificates of Distinction		14.00	
Miscellaneous Expense		9.20	1,518.25
Other Printing and Stationery Costs		457.36	
Post Graduate Committee Expenses		725.00	
Expenses of Delegates to Meeting of American Medical Association		350.00	
Adding Machine		256.64	
Postage		101.00	
United States Savings Bonds Purchase		100.00	
Accounting Services		75.00	
Northeastern Division Meeting Expense—1954		53.77	
Fidelity Bond—Treasurer		50.00	
Office Supplies and Expenses		21.73	
Safety Deposit Box Rental		5.50	
Bank Exchange		4.07	\$ 6,143.18

Medical Service and Public Relations Committee:

Salaries:			
W. A. Dozier, Jr.	\$	7,200.00	
Emmett Wyatt, Jr.		3,300.00	
Mrs. Ethel C. Thomas		2,000.00	
Mrs. Marianne M. Baisden		200.00	\$12,700.00
Travel Expense—W. A. Dozier, Jr.		3,050.00	
Postage and Postage Meter Rental		2,803.01	
Printing and Stationery Costs		2,791.71	
Office Rental		1,070.00	
Telephone and Telegraph		648.92	
Office Supplies and Expense		269.49	
Travel Expense—Alabama State Fair		258.74	
Annual Grant to Women's Auxiliary		200.00	
Payroll Taxes		194.00	
Exhibit Space—Alabama State Fair		150.00	
Photographs		88.33	
Clerical Services—Mrs. Margaret C. Brown		38.50	
Subscriptions and Dues		36.40	
Miscellaneous Expense		25.00	
Transportation on Displays—Alabama State Fair		10.12	
Art Supplies—Alabama State Fair		9.69	
Testimony Fee		5.00	24,348.91
Total Carried Forward			\$30,492.09
Total Brought Forward			\$30,492.09

Journal:

Salaries:			
Douglas L. Cannon, M. D.	\$	600.00	
Luette Kilpatrick		1,020.00	\$ 1,620.00
Printing and Mailing Journals		14,608.74	
Clerical Assistance		25.00	
Returned Check		3.00	16,256.74

<i>American Medical Association Dues</i>	12,287.50
Total Disbursements	<u>\$59,036.33</u>

EXHIBIT "C"

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
SECURITIES OWNED
DECEMBER 31, 1955

Quantity	Description	Date of Issue	Purchase Price	Redemption Value 12-31-55	Increase	Date of Maturity	Maturity Value
6	\$500.00 Series "F" United States Savings Bonds No. D220060F to No. D220065F	1-1-44	\$ 2,220.00	\$ 3,000.00	\$ 780.00	1-1-56	\$ 3,000.00
4	\$500.00 Series "F" United States Savings Bonds No. D274010F to No. D274013F	6-1-44	1,480.00	1,960.00	480.00	6-1-56	2,000.00
3	\$500.00 Series "F" United States Savings Bonds No. D385709F to No. D385711F	5-1-45	1,110.00	1,417.50	307.50	5-1-57	1,500.00
11	\$500.00 Series "F" United States Savings Bonds No. D386331F; No. D386367F to No. D386369F; No. D386371F; No. D386373F to No. D386376F; No. D386378F; No. D386379F	11-1-46	4,070.00	4,950.00	880.00	11-1-58	5,500.00
3	\$500.00 Series "F" United States Savings Bonds No. D677782F to No. D677784F	5-1-49	1,110.00	1,252.50	142.50	5-1-61	1,500.00
2	\$1,000.00 Series "F" United States Savings Bonds No. M1510584F to No. M1510585F	5-1-49	1,480.00	1,670.00	190.00	5-1-61	2,000.00
1	\$10,000.00 Series "F" United States Savings Bonds No. X355045F	5-1-49	7,400.00	8,350.00	950.00	5-1-61	10,000.00
14(A)	\$1,000.00 Series "J" United States Savings Bonds No. M32178J to M32191J	2-1-54	10,080.00	10,290.00	210.00	2-1-66	14,000.00
1	\$5,000.00 Series "J" United States Savings Bonds No. V20131J	7-1-55	3,600.00	3,600.00		7-1-67	5,000.00
			\$32,550.00	\$36,490.00	\$ 3,940.00		\$44,500.00

(A) Purchased for the Medical Service and Public Relations Committee.

Report of Vice-President Payne
Northwestern Division

The fall meeting of the Northwestern Division was held in Jasper in October with the Walker County Society as host. I am proud that my own society went all out to make the meeting a success. A very fine scientific program was presented in the afternoon after which we joined the Auxiliary for a social hour and delicious dinner. After dinner, Dean Robert C. Berson of the Medical College of Alabama gave a very interesting talk.

I wish to congratulate the Jefferson County Medical Society upon its opening of executive offices with a full-time Executive Secretary and office secretary. Under the able leadership of Doctor E. B. Glenn, president, these offices were opened in February 1956. To my knowledge, this is the first full-time county society executive office in the state. I have in my file a copy of the proposed duties of this office and I am quick to admit it is a very ambitious program. Of course, it will take a long time to fulfill some of these duties, such as a proposed society building, but this wide-awake society is well on the

way. I feel that the most good that will come from such an office will be the establishment of good public relations and, as we all know, this is most important. Of course, it will be of tremendous help in a large number of professional matters for the busy physician. My hat is off to the Jefferson County Medical Society for blazing the trail. I heartily recommend that other county societies consider such a move. The small societies that are adjacent to each other could pool their resources and share an office jointly. The societies that feel that this is not practical should certainly have a public relations committee and a grievance committee to bring us closer to our patients and the public.

There seems to be an increasing amount of discontent and at times actual criticism of certain policies and business transactions within our State Association. This seems to be more prevalent in our younger members. I am sure that a lot of this is due to the fact that these members do not understand how the major business of our Association is conducted. They do not realize the hard work and the long hours our Board of Censors spends taking care of our business. I believe that if the Board could devise some way, possibly through the office of public relations, of furnishing the membership with transactions of their meetings at regular intervals, it would dispel a lot of this discontent. An informed membership is usually an intelligent membership.

Coal mining in Alabama is confined almost entirely to our district. I have had the privilege of serving on the U. M. W. A. liaison committee since it was formed. In a separate report of this committee you will hear recommendations for certain changes in this program. I strongly urge their adoption.

Since this meeting concludes my four year term as your Vice-President, I would like to thank the entire Association, and especially the members of my district, for making my term of office an enjoyable one. I know you will continue to give full cooperation to my successor and to him I pledge my full support.

Report of Vice-President Carter

Southwestern Division

The annual meeting of the Southwestern Division of the Association was held in Greenville, January 12, 1956. The following scientific program was presented:

2:00 P. M. Registration.

2:15 P. M. Call to Order.

(1) Invocation—Dr. E. A. Childs, Methodist Minister, Greenville.

(2) Pruritus Ani—Dr. Hugh Praytor, Montgomery.

(3) Radiological Changes Involving the Proctosigmoid Colon—Dr. Garland Wood, Medical College of Alabama.

(4) Medical Diseases of the Proctosigmoid Colon—Dr. Richard Carter, Medical College of Alabama.

(5) Surgical Diseases of the Proctosigmoid

Colon—Dr. Paul Salter, Jr., Medical College of Alabama.

(6) Roundtable Discussion.

The Butler County Medical Society was host to the doctors and their wives following the scientific program. A most delicious dinner was served at the Steak House in Greenville. The meeting was well attended. The scientific program, fellowship, and food were enjoyed by everyone.

I wish to express my sincere thanks to Dr. E. V. Stabler, president of the Butler County Medical Society, and to each member for the interesting, well-planned scientific program, and for the most enjoyable social hour following.

Report of Vice-President Gray

Northeastern Division

The annual meeting of the Northeastern Division was held at the Russell Erskine Hotel in Huntsville, the Redstone Missile Center of the United States, on November 9, 1955 with the Madison County Medical Society and its Woman's Auxiliary as hosts. The following papers were given: Problems in the Diagnosis and Treatment of Jaundice by Dr. Frederick W. Smith, Huntsville; Traumatic Hemophilia by Dr. Walker Reynolds, Jr., Anniston; Treatment of Head Injuries by Dr. Garber Galbraith, Birmingham; Heart Spells by Dr. Tinsley Harrison, Professor of Medicine in our Medical School in Birmingham.

The papers were entertainingly presented and were of a high scientific order. They would have done credit to a much larger meeting.

After the scientific meeting, a pleasant social hour, followed by a delectable dinner, was enjoyed by the doctors, the members of the auxiliary and guests.

The Vice-President expresses his thanks to Mrs. Frederick W. Smith and the members of her group in the Madison County Auxiliary who did such a fine job on the occasion. His thanks also go to the host society headed by Dr. Henry L. Anderson.

A Heart Association meeting was held at Decatur on Feb. 8, 1955, hosted by the Morgan County Medical Society. Drs. DeCamp and Adriana of New Orleans and Dr. McManus of Birmingham presented papers.

As I did last year, I must again draw the attention of the Association to the problems of the divisional meetings. Competitive pressure in this area is very great. Annual meetings in Atlanta, Chattanooga, and Birmingham, plus sectional meetings of the American and International College of Surgeons, are only a few which our members are privileged to attend each year. At one time, I am sure these divisional meetings had an important place. In general, they are now poorly attended. It is true that it affords an opportunity for us to become better acquainted and for us to enjoy a short period of pleasure and relaxation. Unless named speakers can be procured and more publicity given, these meetings will never succeed from the

standpoint of attendance. Therefore, unless the Association can devote more money to these meetings, I believe they should be discontinued.

Report of Vice-President Windham

Southeastern Division

The counties comprising the Southeastern Division of the State Medical Association appear to have had adequate medical care during the past year. As reported in 1954 this area continues to attract physicians who are well trained in the field of medicine designated by them as their type of practice. The general practitioners are of high quality and the area continues to attract specialists in various medical fields. Hospital construction under the Hill-Burton program continues throughout the Division. Several new ones have opened, others added to, and a regional type hospital has been started in Houston County. Beds for general hospital care are rapidly approaching adequate, but facilities for the care of special types of patients, such as tuberculosis, continue grossly inadequate and, in some cases, non-existent.

General attendance of doctors on their local society meetings is below the desired level. As a general rule, counties comprising the district are rural, and thereby requiring few doctors in each county and as a result interesting and informative programs cannot be had by each County Medical Society. Problems arising are referred to the responsible physician and as far as I know they are adequately cared for. Propositions are in the offing for a combining of counties in order that a larger group can have scientific programs of value to the represented profession. This may be a way to meet professional requirements, but this will not take care of such things as public relations locally and actions required by local boards of health to meet the problems in their respective counties.

On October 27th 1955, I attended the Gulf Coast Clinical Society as a representative of President Chenault.

On February 9th, 1956, a division meeting was held in Phenix City and the entertainment and scientific program were excellent. The attendance by doctors in the Division was poor. However, it was compensated for by a large attendance from nearby military installations and the state of Georgia. Russell County has only five members in its society and should be commended for the very fine job done for the Division in having the Division meeting.

I have previously stated, and hereby do so again, that the office of Vice-President of the Association as now constituted is now obsolete. This is based on an experience of five years. I hereby endorse the proposed action of the Mobile County Medical Society in its resolution to have the present Constitution and By-laws of the Association evaluated and, if necessary, rewritten. I believe if this is done, the division of the state into divisions theoretically presided over by the Vice-President will be deleted.

Being submitted to you by other committees are lists of changes in the present medical or-

ganization of the state, as well as other items such as dues, the construction of a home office for the organization, creation of an adequately staffed position of executive secretary for the Association, indoctrination period for new members of the Association, and a closer liaison between the practicing physician and medical students in our University. All of these things seem worthy and are hereby endorsed.

With more doctors entering this area, each will have more free time, and it is hoped that some of this free time can be devoted to public relations and other activities which will enhance the general standing of the physician in the society of this area. With work, and attention to the general problems of the area, we can regain our "Place in the Sun."

The Dental Association of the state desires a full-time State Dental Officer in the State Department of Public Health. Previous to this time inadequate salary has been the principal reason why such a person could not be maintained in the department. As is known by the State Board of Censors, the last man in this position was hired away from Alabama by the state of Georgia because of much increase in salary. The dentists contend, I think rightfully so, that dental clinics for the underprivileged in Alabama are important and that a full-time man to coordinate these activities and others of importance to the dental welfare of the people in Alabama is necessary. They further desire some representation on the State Board of Health. In talking to a number of dentists, a representation of two is most frequently mentioned by them.

Because of the close alliance between doctors and dentists, and because of the importance of their work, I should like to recommend to you for consideration these requests made of us by our dental colleagues.

The President's Message

Two years ago I was honored by my election as President-Elect. One year ago I was automatically elevated to the presidency.

I esteem these as great honors and deeply appreciate the same. In a spirit of humility I have accepted these honors and have tried to live up to the challenge.

During these two years I have had the opportunity to attend the meetings of our Board of Censors, and the Public Relations and Medical Service Committee.

I have had the privilege of attending some of the County Medical Societies and during this last year it has been my pleasure to attend one meeting in each of the four districts.

I wish to compliment our Vice Presidents on the quality of these meetings.

The Northeast District meeting was held in Huntsville; the Northwest District in Jasper; the Southwest District in Greenville, and the Southeast District in Phenix City.

As ex-officio member I also attended the meetings of the State Board of Censors, as well as the several meetings of the Committee on Medical Service and Public Relations.

We had one special called meeting of the College of Counsellors. This was had at Montgomery. Many of us also met with the House Judiciary Committee.

At this meeting we had a fairly representative attendance of the College of Counsellors, the Public Relations and Medical Service Committee, as well as allied groups.

The Medical Association of the State of Alabama, in addition to its scientific and social activities, is by statute the State Board of Health, charged with all public health activities in the state, with power to issue licenses to practice medicine to qualified applicants and to revoke same for cause after proper hearing.

Having power and responsibility to issue licenses has also subjected our Board of Censors to all sorts of pressures from well organized and well financed groups of untrained illegals seeking through legislative action to obtain wholesale political licensure to practice medicine.

This is an educational matter. If these individuals had the necessary training and education to enable them to diagnose and treat diseases of human beings by any system whatever, then they could easily pass the examination by the State Board of Medical Examiners and thereby procure licenses to practice.

I was told that pressures of all kinds were brought to bear upon the Legislature to pass many bills which were deleterious to the welfare of the people of Alabama. But we are indebted to many members of the Legislature who withstood such pressures and defeated bills deleterious to the public welfare of the state. All such Legislators deserve the thanks and commendation of the Medical Association of the State of Alabama.

Many polls have been taken by both professional and lay groups to ascertain the feelings of the public toward our profession.

These also show how well we have built up our public relations.

Sometimes doctors have been more critical than have laymen.

It is generally conceded now that doctors' fees have not kept pace with other professions or even with the wages of trained artisans.

Standards of medical and surgical techniques have been so vastly improved that our GP's today are better trained in all the specialties than were the specialists themselves of 75, 50 or even 25 years ago.

Our academic, scientific and technical training has far outrun our moral, ethical and spiritual growth.

Not always is service put before self. Our students should early be indoctrinated with the philosophy that medicine is a profession and not a trade.

This is particularly true in Alabama where the State Medical Association is also the State Board of Health. Membership in the State Medical Association in Alabama is a voluntary matter. A doctor can practice medicine in Alabama legal-

ly and ethically and never try to join organized medicine. But then he would be a lone wolf without those professional contacts that come with membership in our county and state medical organizations.

We have but one medical school in Alabama. This is a fully accredited four year school, an integral part of our State University.

It offers its students a training that ranks with the best.

Usually our students will compare favorably with the best students in other schools. We have quite a block of scholarship students. These necessarily are Alabama students. I think a sprinkling of desirable students outside of Alabama would be beneficial both to our own and the others.

The greatest care should be exercised in culling and selecting students for entrance.

By the time a student is old enough and has the required preliminary education we should be able to detect in him other qualities than "academic" and in applicants for scholarships something more and better than mere "need." We should find the qualities we want to see and develop in our doctors.

Once a student is entered in the freshman class we should begin his indoctrination in medical ethics, by precept and example, and he should be taught particularly as to the peculiar and special obligations he assumes by becoming a member of the State Board of Health via membership in his County Medical Society and *ipso facto* the State Medical Association.

This process should continue throughout his school and hospital training.

Nor should we subject these students to the influence of teachers who are irregular or unethical in their lives.

When a student becomes an alumnus he should be well qualified to become a member of our State Board of Health.

Then when the profession and/or our medical school has a problem or needs public support these same alumni should form the first line of defense or offense. Then would we be almost invincible.

I do not think that heretofore we have shown the proper interest in the alumni nor had the proper support of the alumni.

I have talked with some lawyers about the difference between the legal and medical organizations: one thing they invariably mention is that when a lawyer is charged with some offense, tried, found guilty and disbarred, they always emphasize the fact that a lawyer cannot be expelled from the bar association and still have license to practice law.

And they tell me the doctors should change their rules to obtain the same effect.

I am not sure they are not right. I suggest that our Board of Censors give some study to this question.

I have thought that our Board of Censors has

been derelict in its duties as to enforcing the medical practices act. I have thought that our Board of Censors should do for us all that their grievance committee does for the bar association.

This question probably should not be referred to the Board of Censors to decide how well they have performed. If the State Association adopts the Mobile Resolution, the committee thus created might have this question.

I understand that under our present laws any circuit judge on request can instruct his solicitor to file quo warranto proceedings against anyone who has intruded into the practice of medicine without required license.

This can be done in the name of the state and without the Medical Association assuming any financial responsibility.

I do not think we should have to spend the limited available funds for lawyers' fees to prosecute these cases when it is a public duty of the state to enforce its laws. Nor do I think it will be difficult to get effective action if we ever make up our minds and try.

When a man is deliberately, wantonly, wilfully and knowingly violating the law, and if he knows that he is violating the law and his attorney knows he is deliberately and intentionally violating the law; and when such a lawyer in such a case demands a jury trial; and when all parties know that the only purpose of such demand for jury trial is to furnish the setting so the cunning lawyer can play on the ignorance and/or prejudice of the jurors thereby getting them to violate their oaths, in such a case some of the lawyers tell me there is no professional obligation on a lawyer to play such a part.

I have heard doctors say that since illegal practitioners have been allowed to ply their cult and build up a practice and earn a livelihood, then should they have some consideration since to stop them would cut off their income.

This reminds me of the young man who in cold blood murdered his father and his mother and when put on trial in criminal court made a special plea for mercy because he was an orphan.

The Board of Censors referred to me for study and recommendation the question of medical care for indigents. This is a complicated question for which there is no ready answer.

Many efforts to find a solution have been made by individuals and organizations all the way from Dr. Elmer Hess, President of the A. M. A., and hospital associations, to the State Department of Pensions and Security, but the answer is not yet.

This is a health problem in which the organizations of medical men should take the lead. We may have already lost the initiative.

Personnel and finances will be required.

The Alabama Hospital Association has taken a step, a definite step, forward.

They have had prepared and introduced in the State Legislature a bill creating a board or committee to study this question.

The Medical Association should have already taken this step. We have lost the ball in high weeds.

If this bill is not passed by the Legislature we should recover the ball and set up a study committee to join with a similar committee from the Hospital Association in completing a plan and putting it in operation.

Inevitably mistakes will be made but we should not make that greatest mistake of all—doing nothing.

If we are unable or unwilling to make up our minds and agree on something and start something, we might refer it to our Woman's Auxiliary. They will at least say something.

Unless doctors recognize their opportunity and their responsibility, the do-gooders and politicians will rush in where angels fear to tread.

If the doctors guide the plans as they develop we should be able to prevent regimentation and compulsion so far as our profession is concerned and preserve for the indigent and aged the free choice of doctors and hospitals.

I have had the privilege of meeting with the Public Relations and Medical Service Committee from time to time. Its members have tried to do a good job under difficulties. Limited finances and limited personnel have made it impossible for them to do all they have seen the need of.

I have seen their report prepared for this meeting.

They are modest in their recommendations. I suggest that we comply.

If there is some other, better way to finance this than by raising dues—then of course, let's have it.

I recommend that we buy or build a Home Office Building for the State Medical Association, adequate for all our needs and for office space to rent to the AAGP and other allied interests.

This building should be in Montgomery, the State Capital, or else in Birmingham, the Medical Center of the State.

Senator Hill has introduced a bill in Congress to build a Medical Library Building in Washington. This is not a duplication of any present facilities. I recommend that we endorse this bill and that we request the Hospital Association, the Dental Association and the Pharmaceutical Association to endorse it also and send these endorsements to Senator Hill.

The attitude of the members of the Association has been most friendly and cooperative.

Vice-President Windham accepted the appointment as representative and carried greetings to the Gulf Coast Association at Pensacola. Dr. A. A. Jackson very kindly agreed to represent us at the Mid-South meeting in Memphis.

At the Feb. 1, 1956 Executive Board Meeting of the Blue Cross-Blue Shield, after a couple of "whereases," it was endorsed as follows: *Therefore Be It Resolved:* That this committee hereby expresses its willingness to make a service-type

Blue Shield contract available to the physicians of any county who might request such a contract through action of their County Medical Society, provided that the State Medical Association at its meeting in April 1956 does not take the official position that such a contract should not be entered into between this Corporation and the physicians of any such county."

One of the "whereases" this resolution mentions is as follows: "Whereas there has been much difference of opinion expressed in past meetings of the State Medical Association with regard to this type of contract."

It seems to me this is a negative or left-handed approach calculated to catch this Association off guard. And since there has been so much opposition to this type of contract it is now resolved that unless this Association at this meeting, "April 1956," takes "official position that such a contract should not be entered into," the committee expresses a willingness to make such contracts.

They do not attempt any explanation of the terms or conditions of the contract.

It is uncertain what interpretation would be put on such contracts.

I recommend that we take the official position that "such a contract should not be entered into."

I have a letter from Dr. Hal M. Davidson, President-Elect of the Medical Association of Georgia, enclosing a questionnaire as to our interpretation of medical ethics in the matter of corporate practice of medicine, particularly in the methods of practice of anesthesiologists, pathologists, roentgenologists in institutions and also concerning the question as to what procedures in hospitals and in teaching institutions must be considered the corporate practice of medicine.

The questions are regarding "private clinics owned by doctors."

I enclose the questionnaire and ask that it be referred to the Board of Censors for study and answers.

Since the questions refer to us as well as others I suggest the Board of Censors include the questions and answers in a report to the Association at a later time when they have had time to give them proper study.

I have heard from members that they are not informed of the financial transactions of the Board of Censors. I suggest they furnish such a statement annually.

B. W. McNease, M. D., and E. Bryce Robinson, Jr., M. D., delegates from Alabama to the American Medical Association which met in Boston, Mass., November 29-Dec. 2, 1955, made a very succinct and informative report which should be studied by all the members of the Medical Association of the State of Alabama. Our thanks are extended to these delegates.

Dr. Elmer Hess, A. M. A. President, told the opening session and House that complacency should be regarded as the medical profession's greatest enemy. Although good progress is being made in informing the public and the pro-

fession of the objectives of organized medicine, he said, educational efforts must be intensified and the list of physicians' tangible accomplishments for the health benefit of the public must be increased. He further stated that doctors take care of sick folks PERIOD; that medicine can become a racket if other considerations are put ahead of that one simple humanitarian service to which we are all pledged.

Drug addictions, fee splitting and criminal abortions are three unethical practices which are still too common. Dr. Hess says every doctor knows what fee splitting is.

Our State Board of Censors is inclined to put mercy ahead of justice. Justice should be tempered by mercy and not controlled by it. The licenses of all dope fiends, drunkards and fee splitters should be revoked and stay revoked.

I have a long communication from the Tuscaloosa Chamber of Commerce. They are pleading that their facilities are now adequate to take care of the State Medical Association and are asking that we hold some of our meetings there. This is a matter that should be considered by the Association.

I quote from A. M. A. President Elmer Hess, "It is my feeling that the physician is first a citizen and as a citizen is interested in what goes on in a community. I have always felt that physicians should take part in community activities. They should be willing to speak before Community Chest luncheons, Parent-Teacher Associations, and before Rotary, Kiwanis, Lions Clubs, etc., in an endeavor to give medicine's message to all the people in the community." I will go further and say doctors should make themselves available to serve as members of Boards of Education, City Councils and other governmental bodies. There should be at least one doctor in every state legislature. "During the legislative session of 1903 the osteopaths of the state, led by the astute and captivating Mrs. Ligon, herself an osteopath, and the wife of an osteopath, came dangerously near overthrowing the medical practice laws of the state by attempting to have set up a separate Board of Examiners for the followers of this cult; this bill had passed the lower House and, upon reaching the Senate, received the vote of 17 to 17. Fortunately for our cause the president of the Senate was none other than the distinguished Dr. Cunningham, who promptly decided this important question in favor of organized medicine. This is but one example from many of a similar character."

During the present administration the Chiropractors made a similar well financed effort to have a separate Board of Chiropractors set up to license all future Chiropractors after this legislature without regard to qualifications, or lack of them, was to have given political licenses to the horde of this cult already in Alabama. This was an ominous threat and might have succeeded but for the diligence of the Executive Director of our Public Relations, Mr. W. A. Dozier, Jr. He was ably supported by Dr. Finney and his committee and some actively interested members of our profession, as well as a hard core of

legislators who stood firm for the interest and welfare of the public.

It will always be so. We will always have to fight to protect our birthright. While the forces of production and conservation are fighting our battles the forces of contamination, deterioration and destruction will be just as busy with their nefarious work. I must not forget to mention the active and effective work of the Cancer Society during this last year in this state. They and the Woman's Auxiliary have done valiant work in their separate fields.

Our Woman's Auxiliary has been busy doing a good job. Its members have both wisdom and energy and should receive our thanks and commendation.

The shortage of nurses in Alabama is a very serious handicap to the care of our sick and injured. I had a short discussion with and a letter from Mr. Matthew F. McNulty, Jr., Administrator of the University Hospital. He is cognizant that it will take a lot of "working together" by the Medical Association and the hospital administration to overcome the tremendous Alabama nursing shortage.

Subsection 4 of Section 13 of the Constitution says: In enumerating the duties of counsellors that they shall "attend the meetings of their county societies and uphold the authority and promote the efficiency and power thereof." It has been charged that some members of the Board of Censors have neglected to discharge this duty. I recommend that any censor who fails to attend the meetings of his County Medical Society be automatically removed from the Board of Censors, and to implement this provision of the Constitution I suggest that the secretary of each society in his annual report be required to certify as to the number of meetings the society has held and the number of meetings attended by the members of the State Board of Censors in their county.

Article XVI of the Constitution—Meetings and Business of the Association, Section 3, Item 2, says: "Matters relating to the enforcement of the law regulating the qualifications of practitioners of medicine in the State."

In Birmingham, Alabama, 31 years ago this month, the State Board of Censors in its report following its investigation of a matter referred to it said as follows: "The Board has had this case under consideration for the better portion of two days. Issues have been raised which extend far beyond the jurisdiction of the..... County Medical Society. It appears from the investigation that the offenses complained of, as having been committed in..... County, are being committed in a number of places in other portions of the State. The Board feels that if a solution is not found whereby abuses of the ordinance can be remedied, the practice of medicine in Alabama will degenerate to the level of a mere trade and the whole Code of Ethics, of necessity, have to be abrogated."

Later in this same report, after finding that the conviction was justified by the evidence, said, "but he plead in palliation of his conduct that he was conducting a hospital in the same manner that a number of other hospitals in

Alabama were being conducted" . . . "The Board feels that such conduct, no matter by whom committed, constitutes a very grave offense against customs, usage and standards of ethics subscribed to by the medical profession. If such conduct is permitted to go unrebuked, it will bring into contempt the members of an honorable profession, but Dr. pleads in palliation of his offense that other men in different parts of the state, prominent in the medical profession, were following the same customs and he, therefore, concluded that it would be proper for him to do so. The Board feels that there is justice in his plea."

The State Medical Association adopted and endorsed this report of the Board of Censors. So far as I know nothing has been done by the Association to correct the offenses complained of. It is my considered opinion that there is no justice in the plea that because others were guilty of the same offense and were not prosecuted that any doctor is also entitled to follow the same practice. This seems to be the philosophy followed by the State Board of Censors and the State Medical Association regarding Chiropractors. I would recommend that the State Association definitely and specifically assert that the guilt of others does not acquit any offender of his wrong doing.

How long shall it take our State Board of Censors and the Medical Association of the State of Alabama to implement some of the good intentions that we have harbored so long?

Again I want to extend my thanks and appreciation to the Association for the honor conferred on me and for the cooperation of all the Association and for the contributions of our visiting doctors.

Scientific Program

Dr. Duane Carr, Memphis, Tenn., read a paper entitled Thoracic Emergencies in the Aged.

Behavior Problems in Adolescence were discussed by Dr. J. Roswell Gallagher, Chief of Adolescence Unit, Children's Medical Center, Boston, Mass.

Dr. C. Lee Buxton, Yale University School of Medicine, New Haven, Conn., presented a paper on Prepared Childbirth.

Convulsions in Childhood were dealt with by Dr. Katherine Dodd, Professor of Pediatrics, University of Arkansas Medical School, Little Rock.

Miscellaneous Business

During the course of the morning's proceedings, Mrs. W. G. Thuss, Birmingham, President of the Woman's Auxiliary, made a report to the Association as follows:

On behalf of the members of the Woman's Auxiliary to the Medical Association of the State of Alabama may I express my appreciation for this opportunity to present a brief progress report of our activities during the year.

We have 27 organized county auxiliaries, and 84 members-at-large in 35 counties, making our total membership 1,150 in the state. Only five counties have no representation in auxiliary work.

Our program theme "Active Leadership in Community Health" is projected into all our activities. We believe that our principal role as your Auxiliary is that of the volunteer in health education. We are aware that only a properly informed member can achieve this goal; consequently our program is one of intensive study as well as one of action.

Increasing the awareness of the members of the county auxiliaries to the purpose of the American Medical Education Foundation is one of our most important projects. This year our contribution to the Foundation will be over \$1,000, with many auxiliaries giving \$1.00 per member, and our smallest one giving \$10 per member.

During Medical Education Week, April 22-28, we shall participate in the 80 Dimes Campaign. Mrs. W. J. Rosser served as area chairman for the Fund and did a fine job of organizing. She has shown the film "Danger at the Source" to 20 women's organizations and assisted the Medical College in arranging the meeting in Birmingham with Mrs. Deborah Flynn, the National Director of the Women's Division.

Mrs. J. J. Durrett and I attended the Southern Regional Legislative Conference of the A. M. A. in Atlanta. The legislation discussed was explained to all counties visited. Special delivery letters and a follow-up telegram were sent to all auxiliary presidents asking them to have individuals write state senators, Secretary Folsom, and Mr. Adams regarding HR 7225. The response was gratifying.

In Nurse Recruitment 24 scholarships and loans amounting to \$4,937.00 have been given. Fourteen Future Nurses Clubs are sponsored. Jefferson County-Birmingham maintains five loans to medical students amounting to \$2,688.42, with an unused balance of \$370.73 at the Medical College.

This year we have exceeded all previous records in subscriptions obtained to Today's Health Magazine.

Each county auxiliary was urged to have a program or project for public education during Mental Health Week. Mental health committees in many of the auxiliaries work with local organizations in providing money, clothes and entertainment for patients at Bryce Hospital.

Training programs in the realm of Civil Defense are being held for members, and qualified members are participating in training local women for the Civil Defense program.

Two state-wide surveys have been conducted. The essay contest for high-school students, sponsored by the Association of American Physicians and Surgeons, which the Medical Service and Public Relations Committee of your Association requested the Auxiliary to undertake, was held in only three counties. However, these auxiliaries consider this their best public relations undertaking. Each medical society in the three counties participating gave generous

prizes and the state prize for the best essay, won by a girl from Cullman, is a \$25 bond. We were asked by the Medical Service and Public Relations Committee to offer the essay contest to more counties next year. If the Auxiliary votes to comply with this request, we will need a larger prize as an incentive to students to compete.

The second survey was to determine the contribution of both time and money which physicians make to their communities. Our National Auxiliary asked local groups to do this *only* with the permission of our local societies. Some of you asked us to do it; others preferred to do it through the Medical Society.

I have visited 17 county and 2 district meetings; made the state report at the convention in Atlantic City; participated in the A. M. E. F. panel at the Conference for State Presidents, Presidents-elect and National Chairmen in Chicago; reported as Councilor for Alabama at the Southern Medical Association Convention in Houston; attended four Medical Service and Public Relations meetings in Montgomery as an ex-officio member; assisted in organizing two of our three new groups, and held an executive board meeting in September.

Mrs. John Chenault, Decatur, our immediate past-president, serves as Program Chairman on the National Auxiliary Board. I have been co-chairman of the Committee on Organization for the Southern Region of the Auxiliary to the American Medical Association for the past two years, being responsible for organization in Alabama, Mississippi, Georgia, Louisiana and Florida.

This is the second year that creative art, handicraft and camera-craft done by doctors and their families have been exhibited at the convention. Many interesting hobbies are represented and we hope you will come to see the display and to vote for your favorite entry. This exhibit is at the Redmont Hotel and small prizes are offered for each category.

I would like to request on behalf of the Auxiliary that, if it meets with your approval for our District meetings to be held concurrently with your district meetings, that each Vice-President of the Association inform the Auxiliary Vice-President for the corresponding district of the time and place of these meetings well in advance of the meeting date. We need the information as early in the year as possible in order to plan our programs and notify members and prospective members. In the past we have sometimes had this information only a few days in advance. In this connection may I offer the services of the Auxiliary in any capacity you may desire to assist in the arrangements for these meetings.

We are indeed very grateful to Dr. Frank Chenault, to members of our advisory council, to Dr. Douglas Cannon and his office staff, and to Mr. W. A. Dozier, Jr., for their assistance. May we also express our appreciation to the State Association for the generous contribution which is made to our newsletter, WAMASA News, and to the Jefferson County Medical Society and Mr. Steve Yates for the many courtesies during this convention.

In closing, I would like to repeat the words of our National president, Mrs. Mason G. Lawson who spoke to the AMA House of Delegates: "I would remind you that your county and state auxiliaries are only as alert and as enthusiastic as their parent medical associations. Auxiliary activity depends solely on your leadership and direction. Your Auxiliary does not wish to be 'out in front,' but rather we are content to be your most ardent and resolute followers."

I promise you the unified support of our auxiliaries in any program which you wish them to undertake. Thank you for the privilege of bringing this report to you. It has been a pleasure to be with you.

The following resolution, introduced by the Mobile delegation on behalf of the Mobile County Medical Society, was read to the Association and referred to the Board of Censors.

A RESOLUTION

WHEREAS, The Medical Association of the State of Alabama is organized according to the plans and policies set forth in its constitution; and

WHEREAS, An integrated, up-to-date constitution which has all of its component parts in balance is necessary for an organization to achieve and to continue maximum effectiveness; and

WHEREAS, The constitution of the Association has not undergone an official comprehensive revision or study since 1942; and

WHEREAS, Additional amendments to meet current problems of the profession, repeal of obsolete and unworkable provisions, and a reenactment of sound, time-proven policies should be in the best interest of the Association, now therefore be it

Resolved, That the delegates of this Society to the next annual meeting the State Association shall:

(1) Present a copy of this resolution to the Secretary-Treasurer of the Association and request that it be referred to the State Board of Censors.

(2) On the day and at the time designated for the transaction of business, move, and second if necessary, that the President be authorized and directed to appoint a committee of at least five but no more than seven members to carefully study the history, philosophy, and provisions of the present constitution of the State Association to determine what, if any, alterations are necessary and to report and make appropriate recommendations at the next succeeding annual meeting of the State Association.

(3) Defend by argument, if necessary, the motion and explain the benefits to be gained by the investigation called for in this resolution, and be it finally

Resolved, That copies of this Resolution shall be sent to the Medical Society of each county of the state of Alabama and to the officers and members of the State Board of Censors.

A similar resolution, received from the Baldwin County Medical Society, was also referred to the Board of Censors.

The following resolution passed at the Blue Cross-Blue Shield Executive Meeting of February 1, 1956 was read to the Association and referred to the Board of Censors.

A RESOLUTION

WHEREAS, This Corporation has been advised that the medical societies of certain counties are interested in a service-type Blue Shield contract for low-income groups, and

WHEREAS, There has been much difference of opinion expressed in past meetings of the State Medical Association with regard to this type of contract, therefore be it

Resolved, That this committee hereby expresses its willingness to make a service-type Blue Shield contract available to the physicians of any county who might request such a contract through action of their county medical society, provided that the State Medical Association at its meeting in April 1956 does not take the official position that such a contract should be entered into between this Corporation and the physicians of any such county, and be it further

Resolved, That a copy of this resolution be transmitted to the State Medical Association by the physicians representing the Association on this Committee.

The following resolution was introduced by Dr. E. Bryce Robinson, Jr., and referred to the Board of Censors.

A RESOLUTION

WHEREAS, The six doctors representing the Medical Association of the State of Alabama on the Executive Committee of Blue Cross-Blue Shield of Alabama have worked many hours on the problem of meeting the medical needs of the low income group of Alabama, including the evaluation of a schedule of fees and services which they requested an actuary to price, and

WHEREAS, The cost developed by the actuary is, in the opinion of the committee, within the range of the ability of the low income group to pay, and

WHEREAS, A majority of this committee feel that such a service contract should be offered to the public on a statewide basis; therefore be it

Resolved, That the committee be authorized by the Medical Association of Alabama to offer this service to the public.

Afternoon Session, Thursday, April 19th 2:00 P. M.

Dr. Maurice E. Barrett, Decatur, read a paper entitled Female Urology in General Practice.

Investigation of Unexplained Deaths in Alabama was the subject of Dr. J. A. Cunningham's contribution.

Dr. E. M. Chenault, Decatur, discussed A New Approach to the Autopsy Problem.

Problems in the Care of the Newborn Infant were dealt with by Dr. Dan W. Burke, Mobile.

Dr. S. D. Davis, Talladega, read a paper entitled Horseshoe Kidney and Ileus and gave a case report.

Ultrasonic Energy in Medicine was discussed by Dr. F. F. Schwartz, Birmingham.

Dr. O. W. Clayton, Birmingham, gave a paper on Carcinoma of the Lung.

Social Event

The staff of the Norwood Clinic entertained the members of the Association, their wives and guests at a barbecue at 5:30 P. M.

Second Day

Friday Morning, April 20th

9:00 A. M.

The State of the Medical College of Alabama was the subject of the paper by Dr. Robert C. Berson, Birmingham, Dean of the College.

Dr. Jos. O. Reed, Harper Hospital, Detroit, Mich., read a paper on Lesions of the Esophagus.

Mr. James E. Bryan, Consultant, Medical Public Relations, Summit, N. J., addressed the Association on the subject The Science Changes, but the Art Is Eternal.

The Jerome Cochran Lecture was delivered by Dr. John B. Youmans, Dean, Vanderbilt University Medical School, Nashville, his subject being The Chronic Toxicity of Salt (Sodium Chloride).

President Chenault awarded Certificates of Distinction to the following physicians of Alabama who had been practicing their profession for fifty years.

Herschel W. Bass, M. D.	Dorman M. Hicks, M. D.
Walter H. Bell, M. D.	Robert L. Hill, M. D.
W. L. Box, M. D.	Miles P. Hughes, M. D.
John T. Burch, M. D.	W. L. Marshall, M. D.
Elkanah G. Burson, M. D.	Robert L. Meharg, M. D.
Wilson T. Cantrell, M. D.	H. R. Morris, M. D.
James O. Foster, M. D.	George E. Nye, M. D.
Thos. H. Gaillard, M. D.	George A. O'Connell, M. D.
Paul E. Gwin, M. D.	Charles A. Olivet, M. D.
Charles P. Hayes, M. D.	Naomi P. Underwood, M. D.
Forest Lee Hester, M. D.	Reginald Van Iderstine, M. D.

Miscellaneous Business

The secretary of the Association announced vacancies as follows in the College of Counsellors:

1st Congressional District—3. The second terms of seven years of W. J. Barber and G. O. Segrest have expired. J. H. Baumhauer's first term of seven years has expired.

2nd Congressional District—3. E. F. Leatherwood has resigned because of ill health. C. G. Godard's second term of seven years has expired. J. M. Barnes' first term of seven years has expired.

3rd Congressional District—1. E. T. Brunson is to be elevated to Life Counsellor.

6th Congressional District—2. R. C. Hill is to be elevated to Life Counsellor. W. P. Baston has resigned.

9th Congressional District—6. J. A. Meadows has resigned. The second terms of seven years of C. N. Carraway, H. Earle Conwell, John W. Simpson and Frank C. Wilson have expired. The first term of seven years of S. Sellers Underwood has expired.

Fraternal delegates from Georgia and Mississippi and from the Alabama Pharmaceutical Association were presented: Drs. S. A. Roddenbery and Guy J. Dillard of Columbus, Ga.; Dr. Cummings H. McCall of Gulfport, Miss.; and Mr. Homer Hollifield, Birmingham.

Afternoon Session

Friday, April 20th

2:00 P. M.

Dr. Henry M. Gewin, Mobile, read a paper entitled Diagnosis: Poison—Unsuspected Poisoning, a Diagnostic Pitfall.

Dr. Robert K. Oliver, Montgomery, discussed The Changing Role of the General Practitioner of Medicine and Surgery as It Relates to the Treatment of Tuberculosis.

The Role of Pyrazinamide in the Chemotherapy of Chronic Pulmonary Tuberculosis was the subject of the paper by Drs. Arthur A. Calix and Kathleen White of Decatur. The paper included a clinical evaluation of 37 cases treated with pyrazinamide in combination with other drugs.

Dr. Tom D. Spies, Birmingham, discussed The Diagnosis and Treatment of Nutritive Failure Today.

Dr. James T. Grimes, Enterprise, read a paper entitled Prognosis in Congestive Heart Failure.

Dr. Robert S. Hogan, Birmingham, dealt with Newer Concepts of Drug Therapy in the Rheumatoid Diseases.

Dr. Michael Newton, University of Mississippi Medical Center, Jackson, Miss., discussed Diet in Pregnancy.

Dr. Clyde Brooks, Tuscaloosa, read a paper on The Clinical Use of Reserpine.

Social Event

The Jefferson County Medical Society entertained the Association and guests at a ball honoring President Chenault at the Birmingham Country Club beginning at 9:00 P. M.

(To be concluded)

AMERICAN MEDICAL ASSOCIATION NEWS

DR. MURRAY TO ASSUME AMA PRESIDENCY IN JUNE

Formal presentation of the American Medical Association's presidential gavel to Dr. Dwight H. Murray of Napa, Calif., will be made at the Inaugural Ceremony Tuesday evening, June 12, in the grand ballroom of Chicago's Palmer House. One of the featured attractions will be choral selections by the Bluejacket Choir of the U. S. Naval Base at Great Lakes, Ill.

Plans are being completed to telecast part of the inaugural program over a local television station.

Immediately following the ceremonies, a reception and ball honoring Dr. Murray will be held in the Red Lacquer Room of the Palmer House.

AMA PLANS CIVIL DEFENSE MEETING

The National Medical Civil Defense Conference, sponsored annually by AMA's Council on National Defense, will be held Saturday, June 9, at Chicago's Palmer House, just prior to the opening of the 105th Annual Meeting.

Although final arrangements have not been completed, the Council reports that a special feature of this year's program concerns the availability and operation of the Federal Civil Defense Administration's 200-bed emergency civil defense hospital. FCDA officials will discuss basic plans dealing with the allocation, distribution and utilization of the hospital units. Staffing patterns and actual operating procedures by professional and other personnel will be discussed on the basis of data gleaned during field tests conducted in April by the Army Medical Corps at Fort Meade, Md., in which representatives of national health and medical organizations participated.

Also on the program will be appropriate films on technical medical subjects related to civil defense and presentations by outstanding authorities in the field.

The one-day session will be attended by representatives of local, state and national civil defense committees, physicians and other leaders of health and medical care facilities. Physicians planning to attend

AMA's Annual Meeting are urged to come a day or two earlier to attend this valuable civil defense meeting. Further information may be obtained from the Council on National Defense.

NEW PAMPHLET ON QUACKS

To help the public identify some of the devices, gadgets and machines used for so-called "treatments" or "cures" of many diseases, the AMA's Bureau of Investigation has issued a new pamphlet on mechanical quackery. This attractive three-fold leaflet describes quacks in general, contains photographs and descriptions of 10 devices or gadgets, backgrounds some of the more notorious fraud cases, and presents a check list for easier identification of quacks in the local community.

The Bureau plans to distribute the pamphlet primarily when the AMA exhibit on mechanical quackery is shown at medical society meetings and public gatherings such as health fairs, museums, state or county fairs. It also will be sent out by the Bureau in answer to mail requests for information.

SEE AMA AT WORK!

The AMA extends a cordial invitation to all physicians and their wives attending the Annual Meeting in Chicago June 11-15 to tour the Association's headquarters. Tours of the nine-story building, located at 535 North Dearborn Street at Grand Avenue, will be conducted by a corps of specially-trained guides from 9 a. m. to 4 p. m. Monday through Friday.

Within the headquarters building are housed the Association's scientific, socioeconomic and administrative offices, including not only offices and meeting rooms but also fully-equipped laboratories, a medical periodical library, a complete printing plant, a film projection room and a radio recording studio. It is the hub of all Association activities, with the exception of the Washington, D. C. information office.

Each physician in Chicago during the meeting is urged to stop in at headquarters to get a first-hand look at his own organization at work.

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THE SCIENCE CHANGES, BUT THE ART IS ETERNAL

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Stamford, Connecticut

You have done me a great honor in inviting me to address your distinguished and venerable society. My good friend, Bill Dozier, tells me that those who have been accorded this particular place on your program in the past have been expected to take off their gloves and indulge in some good plain talk on the subject of medicine and its public relations.

If any layman hopes to talk with physicians intelligently and helpfully about their public relations problems, he must first of all understand physicians. He must know something of the recent history of medical science and the development of specialism. He should understand the social philosophy of your profession, and the ethical codes and relationships among doctors and their colleagues and their patients. He should also know something about the economic arrangements under which physicians practice. He must keep in mind your ancient and profound distaste for self-promotion, for exhibitionism and special pleading. Most important of all, he must have the guts to "call them as he sees them"—to say what has to be said with candor, clarity and courage.

Having all these factors in mind, your public relations adviser—if his message is worth the expense of bringing him to your meeting—should be prepared to describe a public relations concept and to suggest a public relations technique suited to the dignity of your calling and to the subtlety of your problem.

This is a challenging assignment, but I

Address delivered before the Association in annual session, Birmingham, April 20, 1956.

have accepted it, and I shall address myself to it eagerly, affectionately and, I hope, constructively.

The first step toward effective therapy is a confident and incisive diagnosis. So it is also with public relations. The only way to develop an effective public relations program is through an objective study of one's own attitudes, acts and policies. The problem must be defined before the solution can be suggested.

To understand the problems of medicine, it seems to me that one must try to understand the problems of the society that surrounds medicine. For medicine has few if any problems that do not affect the rest of us.

I would like to discuss a few of the important relationships between modern medical practice and our modern society. And the first aspect of our human situation that I would call to your attention is the fact of change.

It has been said that our way of life has changed more radically in the past 50 years than in the 400 years from the beginning of the Renaissance to the end of the 19th century. But even more remarkable than the magnitude of the changes our generation has already lived through is the continuous, breathless acceleration of the rate of change in almost every department of life.

These two factors, the vast changes of yesterday and the soaring momentum of change today, are posing tremendous problems for all of us—problems we can scarcely comprehend but it would be fatal to ignore.

In the world of commerce and industry, let me just mention four new terms, all of them unknown even to the scientists twenty years ago, but each representing a whole new field of development as revolutionary as the invention of the steam engine. The terms I have in mind are automation, plastics, electronics, and nuclear physics.

In the world of medicine, too, there are many new terms to conjure with, words such as chemotherapy, gerontology, prepayment, antibiotics, antispasmodics, anti-hypertensives and antihistamines.

Some of you are old enough to remember those dear dead days, almost beyond recall, before the first World War. That world seems incredibly primitive to us today, yet at the same time it seems serene, secure and comfortable—in contrast to our world of 1956.

In 1900 there were few telephones, electric lights or automobiles; no airplanes, radio or TV. There were few if any electric power plants or women in business, no income taxes or frozen foods.

In medicine, there were no specialists, except for a few eye, ear, nose and throat doctors; there were no hospitals as we know them today; and x-ray was only a bright promise. Therapy was largely symptomatic and the apparatus of your art could be carried around in a little leather bag.

Medical education in 1900 was without any generally accepted standards, and licensure was chaotically uneven throughout the country.

You physicians are living in the midst of an endless revolution all your own. Perhaps better than most of us outside of medicine, you are able to understand the consequences of change. You know that change is not necessarily progress, and that before it can be accepted as progress, it must be tested. Most important of all, you know that in medicine you must keep abreast of progress—or you die, professionally, of galloping obsolescence.

But I wonder sometimes whether you physicians, as a group, have kept up with the changes that are going on in other departments of life—changes that inevitably are profoundly affecting you and your profession. For just as there is a continuing revolution in medical science, so also there are convulsions and transformations going

on in economics, in political thought, in morality and ethics, and in social affairs—all of which impinge to some degree upon the anatomy and nervous structure of the medical profession.

I would like to speculate with you as to what some of these great changes portend—by way of promise or of threat—to modern American medicine.

Perhaps the most fundamental change—and the one nearest the life of the individual doctor—has been described by Dr. Dana W. Atchley. He observed recently that “the old art of healing has at long last been fused with the young science of medicine.” In other words, the scientist has been admitted to the bedside and the clinician has been welcomed into the laboratory.

But there are some doctors, and many lay people, too, who suspect that the “young science of medicine” is in fact overwhelming the “old art of healing.” Some of the consequences may well give us pause. A writer in “Fortune” magazine has suggested that, as the tools of medicine have been multiplied and refined, patients are tending to “credit the treatment, not the physician, with keeping them well. The uncritical awe that used to be given to the individual physician,” this writer observed, “is now given to medicine in general despite the obvious fact that medicine can be nothing more than the activities of the men who practice it.”

Certainly many people today have come to feel that the doctor is less important—or that he himself considers his personal ministrations less important—than his scientific techniques.

One frequently hears it said that the physician is inclined to be more interested in the *case* than in the *person*. Is the science of medicine eclipsing its art? If so—if this became more generally and obviously the fact—then what would happen to the patient-physician relationship and the free choice of physician, as concepts that buttress the traditional structure of medical practice in America?

Of course, the development of the modern hospital has helped to de-personalize medical practice. So much of your work has been taken away from the intimacy of the patient's home or the familiar privacy of your office, and transferred to the cold, glittering impersonal atmosphere of the hos-

pital. Then, too, the hospital people—and you doctors, also—have built up the concept of the hospital as an active, living, functioning entity. People speak of being treated by hospitals, and hospitals themselves sometimes speak of the care and treatment they render—as though the visiting physicians were, like staff nurses and internes, only agents of the institution.

There have also been some highly pertinent revolutions going on in the field of economics, both medical and general. A major part of the pool of charity work has evaporated in the past twenty five years, due in large part to full employment and the growth of the prepayment plans. This fact—and the prepayment plans themselves—have had far reaching consequences for the public relations as well as the economics of medicine. These factors radically affect the doctor's theory of fees and charges. For when the minimum wage is \$1.00 an hour and the income tax runs up to 90%, and when the economy seems to be stabilized with full employment, the classic basis for the "sliding scale" is at least partly obliterated.

The changing economy of modern life has produced a paradox of interest to physicians in the fact that, while nearly everyone has a livable income, surprisingly few people maintain large cash savings. The insurance principle of risk-sharing has been applied to almost every contingency of life, and this has eliminated both the necessity and the incentive to keep large amounts of cash in the bank. Instead, today, most people's savings are invested in insurance, securities, or other income-producing property, and whatever margin may be left is mortgaged by installment debts.

The fact that more people live comfortably these days on a comparatively hand-to-mouth basis, so long as they can insure themselves against the major hazards of life, accounts at least partly, I think, for the discomfort, dread and complaint against the doctor's bill. Having small liquid assets, most people are extremely vulnerable to catastrophe in the event of a serious medical misfortune.

There have also been some revolutions in political thinking, particularly as to the part that government should play in our lives, under the rather vague aegis of the "general welfare" clause in the Federal Con-

stitution. Rightly or not, the people have come to look upon access to good medical care as an inalienable human right. I think we would be only prudent to act on the premise that this political conviction will eventually be translated into a demand for the government to guarantee the provision of medical care to the medically indigent—unless we can perfect our own welfare and insurance programs in good time, and find ways to make them cover—on a voluntary basis—the medically indigent, the elderly, the self-employed and the rural population.

Another fact of modern life which, from a public relations point of view, is not an unmixed blessing, is the rather obvious prosperity of the average medical man. There are plenty of exceptions, of course, but medicine as a whole stands first among the professions in average income. The counterbalancing factors—such as the doctor's tremendous investment in medical education, his relatively short period of maximum earning power, his heavy responsibilities and long working hours, and his high overhead costs—are not as well known to the public as they should be. Nonetheless, we must remember that, in a democratic society, privilege is inescapably accompanied by responsibility.

This kind of economic distinction also tends to set the doctor apart from the less privileged masses of society.

In my opinion, however, most people do not think of doctors as being overpaid, but expect them to be compensated in keeping with the dignity and value of their work. I believe this aspect of your public relations problem could be largely solved if the profession would do a more convincing job of curbing that tiny minority of physicians who charge unconscionable fees.

There has also been something of a revolution in the educational background of your patients during the past fifty years. Popular health education has torn from your shoulders the mantle of mysticism and omniscience. Health is now the most popular year round topic for magazine articles. Also, there is a separate national voluntary health association dedicated to popularizing and raising money for the control, cure or care of almost every disease entity in the medical dictionary. Today, most people evidently believe that their mental and

body processes and your therapeutic procedures should be as comprehensible as they are interesting to the laity.

These are a few—just a few—of the new conditions and trends which medicine, I think, must take into account.

At this point, I will venture to suggest four goals that I think your profession should try to accomplish if you are to preserve the conditions of independent medical practice.

First, the doctor should match his performance to his professions;

Second, the profession should adjust its economy to the economy of the people;

Third, the doctor should match his service in the cure and repair of the disabled by equal service in the maintenance and promotion of good health;

Fourth, the profession should find a secure status and a logical and respectable function for the general practitioner or family physician.

Let me try to elaborate briefly each of these four points:

First, the doctor should match his performance with his professions.

Good public relations for the doctor is ultimately a matter of his living up to his own best image of himself as a "good doctor." This image of the "good doctor," which you and your patient share together, is a solid and substantial thing. It has life and vitality because it was created by the profession itself. It rests upon the memory of thousands of good doctors who have gone before, and the examples of thousands more who practice your profession today.

What does your profession profess? It professes a great idealism, a high nobility, which has come down to us in the Hippocratic Oath, in all your codes and principles of ethical conduct. Your professions are lofty, and your performances should match those professions.

The public does not expect perfection. On the contrary, most people love their doctors because they are human—and, being fallible themselves, they can understand and have compassion for their fallible patients.

Most doctors do a pretty good job of living up to the image of the good doctor. But the thing that hurts you most in the eyes

of the public is your seeming indifference to the occasional doctor who, by arrogant or inconsiderate attitudes or by sharp or greedy practices, makes a mockery of that image. When the profession fails to discipline or correct the errant member, then some people conclude that your fine professions are "as sounding brass, or a tinkling cymbal"—and, worst of all, they infer that maybe you think so, too.

Medicine is a noble profession and it must function under the principle of *noblesse oblige*. Medicine deals with the endless vagaries of human nature, the infinite variety of living organisms, the absolute uniqueness of each human personality. Hence medicine demands the utmost flexibility of maneuver and freedom of decision. It must be bounded only by those codes of ethics which the American Medical Association correctly refers to as "principles to guide to correct conduct." If the time ever comes that the people conclude you are not bound by your own code, they will formulate new rules for you. And both you and they will be the losers, for you will no longer be able to serve the people with that flexibility of maneuver and freedom of decision which are necessary to good medical practice.

My second suggestion is that you should adjust your economy to the economy of the people. And this, to my mind, means the fullest possible use and expansion of the prepayment principle. Through your prepayment plans you have enabled the people to share the unpredictable consequences of illness, and to create credit for themselves in advance of their need for it. You have created a vast and growing mechanism that offers economic stability both to your patient and yourself.

There are some physicians who feel that voluntary health insurance is a step toward socialism.

I think they are quite mistaken. On the contrary, there is nothing more indigenously American than voluntary insurance. Moreover, the development of mass consuming power through consumer credit has been one of the major factors in creating our American standard of living. Therefore, to resist the development of mass consuming power for medical services is to work *against* our free enterprise system.

Until recently, medical and hospital serv-

ice has been provided under an outmoded economic pattern. It was not until Blue Cross and Blue Shield came into the picture that we began to adapt our medical economy to the economics of twentieth century capitalism.

Blue Shield, I think, deserves the special support of the doctor. It was organized by the profession to enable medicine to meet an imperative challenge, and to fulfill an inescapable responsibility to the community. Blue Shield is not operated to produce profits for outsiders, but to serve the mutual welfare of the patient and the doctor. It exists only for public service, which is the true meaning of its non-profit operation.

Blue Shield is the only insurance program that attempts to serve the *entire* community, including most particularly the lowest income groups who are also the most expensive risks and the least profitable elements in the population.

Blue Shield embodies, it seems to me, the real service tradition of your profession. In most areas Blue Shield offers its benefits in terms of fully paid services to the lower income groups, or at least it attempts to relate its dollar payments to the doctor's normal charges for his services to Blue Shield patients.

Then too, Blue Shield deserves your special consideration because it belongs to you. Most people identify Blue Shield—to your great credit—as the doctor's plan. It is the only plan that you control. If Blue Shield were to go under, and the insurance industry take over, the doctor would lose control of the economy of medical practice, and I believe there would develop an irresistible demand for the government to provide medical care security to the vast bulk of the low income elements for whom the insurance industry has never found it profitable to compete with Blue Shield.

Thirty-five million people have bought Blue Shield. In so doing, they have bought themselves a stake in the American way of medical practice. I cannot think of any other public relations enterprise of medicine—apart from its basic professional service itself—that has ever attracted the hard-money endorsement of 35 million Americans.

My third suggestion is that the doctor should match his service in the cure and

repair of the disabled by equal service in maintaining and promoting good health.

One of the brilliant achievements of modern medicine has been the dramatic lengthening of the average span of human life. This you have done by conquering most of the diseases that are caused by germs, bacteria or viruses. You are keeping us alive long enough to become the prey of many more insidious and subtle ailments. The great challenges of the future seem to lie in the realm of the degenerative diseases, the diseases of the mind and nervous system, diseases of aging and senility, and in the whole vast area of the rejections and insecurities of old age.

It is part of the modern spirit to want to live not only longer but better; not only to sustain life but to enjoy, each of us, his maximal state of good health. I think you will find people looking to you more and more for help in achieving this happy state and maintaining it. This revolution obviously will call for an ever deeper insight and understanding of the social and economic tensions of modern life, the consequences of too much or too little financial security, of family conflicts and social frustrations. It will call for the psychosomatic approach, for foresight, for preventive medicine. Most of all it will create a new demand for the complete care of the whole person which is traditionally the function of the family physician.

Which brings me to my fourth and final suggestion: that the profession must find a secure status and a logical and respectable function for the family doctor.

You are all aware of the ferment in American medicine today over the standing and functions of the general practitioner. The A. M. A. is taking a new and possibly decisive interest in this problem. I would like to ask you to look at the problem from the standpoint of the patient. One of his commonest complaints against American medicine is that it is disorganized. The actual working relationship between the general practitioner and the specialist—between the attending physician and the consultant—is often so vague, so loose and confused that the patient doesn't know which end is up.

This problem arises most often in complex and occult situations in which the patient desperately needs a strong guiding

hand. I am referring, of course, to those obscure, enigmatic cases that are referred hither, thither and yon, in a seemingly endless search for a diagnosis or an effective symptomatic treatment.

Maybe the patient started out normally enough with a general practitioner who did what he could and then referred the patient to a specialist for advice. Then the merry-go-round got started, and, after having seen half a dozen assorted specialists, all of whom took their own histories and made duplicating tests—but none of whom communicated with the forgotten G. P.—the patient is completely bewildered, frustrated—and broke.

To such a patient, something seems radically wrong with a set-up that produces such expensive futility and hopeless confusion. He looks about him and cries out: "Who is the general manager here?—I want to see the general manager. I demand to see someone in authority!"

But in medicine, too often, there is no one in authority. There is no general manager.

Every study of public reactions has shown that although most people concede that the old family doctor, 1900 style, is *scientifically* obsolete, universally they yearn for a modern counterpart to carry the classic responsibility of a personal physician.

From a lay point of view, it seems to me we need a general manager in medicine who will command, utilize and supervise all the special skills and ancillary medical and health and social services that should be brought to bear upon his patient's problem. This general manager will coordinate the services rendered by the others. He will interpret these services to his patient, and will accept—in fact, he will *assert*—a continuing responsibility for his patient's total medical welfare.

If specialism had evolved in industry without the concurrent evolution of modern general management—if, in other words, industry had permitted such a dilemma of disorganization to develop as has grown up in the medical world—then we might never have gotten beyond the horse car and the spinning wheel.

In medicine, as in industry, the job of general manager will call for wisdom and vision. It will demand the ability to correlate findings and to integrate various

services. The doctor, as general manager, will need an understanding of human relations, a knowledge of when, where and whom to employ, or when to do the job himself. The final authority and responsibility will be his, for his is the top job—and, in industry, the general manager gets the top pay.

Needless to say, a general manager could not function in medicine unless the specialists resolved to support him and to accept their logical roles. Needless to say further, the evolution of a class of general practitioners capable of assuming this function will take place only after many changes have been made in our philosophy and methods of medical education, in our pattern of relations between physicians and in our concept of what is good for the patient.

It is a paradoxical fact that the physician, whose most elemental business is to understand the rest of us, seems at times to be that element of society least integrated with the social complex of our times.

I would hesitate to say who is out of step with whom.

I do know that medicine is perhaps the last sanctuary on earth of many precious and wonderful values. I know that the traditions of medicine stand in lonely and proud defiance of the tawdry commercialism and humbuggery of our age.

But medicine must change with the times, in all but the eternal principles and purposes that medicine has always served. So long as it accepts only those changes that will enable it better to serve the people, medicine's future will be secure.

A. M. A. Publishes New Directory—The 19th edition of the American Medical Directory, listing almost a quarter million physicians, has been published by the American Medical Association.

The edition, the first since 1950, contains 3,122 pages and gives information on 240,638 physicians in the United States, its dependencies and Canada, according to Editor Philip E. Mohr, of the A. M. A. directory department. It also lists American graduates temporarily in foreign countries.

Since the 1950 Directory, more than 250,000 changes of address have been recorded in the files of the directory-biological department; 46,348 names have been added; 24,225 have been deleted because of death, and 1,172 deleted for other reasons. In the 1950 Directory, the total number of physicians listed in the United States was 201,277; in the 1956 edition, the number is 218,061, a gain of 16,784.

EXPLORATORY LAPAROTOMY TO RULE OUT MALIGNANCY

T. BRANNON HUBBARD, M. D.

and

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INTRODUCTION

Sir William Osler, almost half a century ago, in discussing the diagnosis of cancer of the stomach, concluded as follows:

"Nowadays, when exploratory laparotomy may be advised with such safety, the surgeon often makes the diagnosis. The practitioner should recognize the fact that there are cases of cancer of the stomach in which a positive diagnosis can not be reached for weeks or months by any known means at our command except exploration."

The purpose of this paper is to emphasize the point that, though radiology has progressed far as a science since Osler wrote the above, nevertheless there are many lesions in the stomach as well as in other abdominal organs which can only be diagnosed by exploratory laparotomy even today. A delay of weeks or months until such lesions become clinically or radiologically obvious may mean the difference between salvage and loss.

CASE REPORTS

Four cases are presented to illustrate the importance of early exploration:

Case No. 1. A white female was examined first in the fall of 1954 when she was 66 years old. At that time she gave a history of intermittent, severe pain, increasing in severity and frequency, in the midepigastrium. The symptoms had begun several months previously. A thorough check-up, covering a period of four days and including all abdominal x-ray procedures, revealed no lesion and she was followed conservatively.

Case No. 2: This 73 year old white male was first seen by us in April 1953, presenting the story that for 5 months he had had abdominal pain, worse on the right side, which was relieved by passing gas. Over the same period he had lost 10 pounds, and had felt progressively weaker. X-rays had revealed no pathology in the stomach, small bowel, colon, or urinary tract. Exploratory laparotomy to rule out malignancy was performed April 21, 1953.

Results: Case No. 1, who was followed conservatively, was admitted to the hospital one year later in October 1955. She was in moderate shock, having been nauseated and having passed many tarry stools over the past four days. Red blood cells numbered two million; hemoglobin measured 8.0 gm. Under conservative management the bleeding was controlled and a G. I. series now revealed a large fungating lesion of the cardia of the stomach. At operation an extensive lymphosarcoma of the proximal stomach was found with metastases to the liver. The primary lesion was ulcerating posteriorly onto the celiac axis, so to prevent further hemorrhage the stomach was resected as a palliative measure. The patient survived the operation and was able to leave the hospital but died two months later. Autopsy revealed extensive involvement of the liver and the mediastinal and epigastric lymph nodes.

In regard to Case No. 2, at exploratory laparotomy a large tumor mass was found involving the ileo-colic mesentery. In spite of its size it was localized, and was resected, together with the terminal ileum and right colon. Pathological examination revealed Hodgkin's disease, and postoperatively he received x-ray therapy to the operative site. Today, three years after operation, he is healthy, asymptomatic, and leading an active life.

Case No. 3: This patient, a 67 year old white woman, first showed evidence of gastrointestinal disease on February 2, 1955 when she vomited blood, passed tarry stools, and became weak. She also at this time began to notice intermittent epigastric pain. A similar episode of moderate hemorrhage occurred in May, and again in August 1955. During these months the intermittent pain had continued and she had lost 30 pounds in weight.

A barium x-ray of the stomach on September 12, 1955 revealed no cause for the pain or the bleeding. Her hemoglobin was 14.0 grams and her red cell count 4.7 million. Conservative observation was continued.

Case No. 4: This 69 year old white woman was admitted to the hospital on April 24, 1953. She gave a story of left upper quadrant abdominal pain and "gas pains about the heart" after eating. The symptoms had been present for about 6 months and were growing worse in spite of conservative treatment which included a bland diet and antispasmodics. She had lost 20 pounds in weight over the same period. Complete x-ray examination of the abdominal organs revealed no pathology except for a moderately large diverticulum of the second portion of the duodenum and diverticulosis of the sigmoid colon. Exploratory laparotomy to rule out malignancy was done on May 1, 1953.

Results: Case No. 3 was admitted to the hospital scarcely two weeks after her "negative" stomach x-rays. She had had a massive hemorrhage and her blood pressure was unobtainable, and her condition precarious. Her shock was treated with 2,500 cc. of blood over a 16 hour period and she was then operated upon. On the lesser curvature of the stomach, at the incisura, there was a benign gastric ulcer, measuring 2.5 cm. in diameter; and in the pylorus there were two submucosal nodules of aberrant pancreas, the largest measuring 8.0 mm. in diameter. A gastric resection was performed and recovery was uneventful.

The pancreatic nodules were only incidental findings, for the ulcer was the obvious site of hemorrhage. However, they are mentioned, because we have here three lesions, the ulcer and the nodules, all quite readily apparent on opening the stomach, but none of them visible on careful x-ray examination by a capable radiologist. Although this patient is now well and asymptomatic, there were several precarious hours during her last hemorrhage, and the statistical risk of emergency gastric resection for massive hemorrhage is, of course, much greater than an elective resection as in Case No. 4.

Case No. 4, who underwent elective diagnostic laparotomy, presented, in addition to the duodenal and colonic diverticula, an ulcer crater on the lesser curvature of the stomach just distal to the incisura. This ulcer measured 3.5 cm. in greatest diameter and had perforated through the stomach wall into the lesser omentum. There was considerable induration about it and it could not be differentiated from a cancer.

Therefore a radical resection was performed as though for malignancy. Recovery was uneventful and the patient remains well at the present time.

Although pathological examination revealed this to be a benign ulcer, it is doubtful, due to the depth of perforation and extent of scarring, that healing would ever have occurred. Moreover, having perforated quite close to the left gastric artery, hemorrhage would have always been a threat. More important to this discussion, however, is the fact that the lesser curvature of the stomach was very distorted and indurated and a similar lesion could easily be malignant. Yet gastro-intestinal x-rays showed no abnormality 3 days before operation was performed.

This case is also illustrative of the old axiom that one should not be too ready to ascribe symptoms to the known lesions (such as the duodenal or colonic diverticula in this case), and stop searching for a more serious etiology.

DISCUSSION

It has generally been a dictum of good surgery that one should have a diagnosis and a pretty good idea of what one is going to do before the operation is begun. There is also the dictum that one does not want to perform unnecessary operations. These ideas are difficult to reconcile with the exploratory laparotomy, for certainly there will be explorations where no pathology is found. However, if one goes into the past history of a number of abdominal malignancies one is impressed with the number that have been extensively investigated and declared sound six months to a year before x-rays finally show the now larger, and unfortunately more extensive, lesion. The above few case reports do not offer any material from which to make any factual or statistical conclusions. They are presented merely to suggest that a more aggressive philosophy should be adopted, based upon the fact that x-rays are not infallible and that exploratory laparotomy today carries very little risk.

It is our feeling that if a patient is over 40 years of age and develops for the first time abdominal symptoms which did not exist before, he should be thoroughly investigated, this investigation including x-ray studies of the entire gastro-intestinal tract by a qualified radiologist. If the symptoms can not be ascribed to a definite "med-

ical" disease, treatment of which results in prompt disappearance of the symptoms, the patient should be offered the benefit of exploration. This is, of course, by no means an original idea, the most energetic proponent of this thesis during the present generation having been Alton Ochsner.

It should, of course, be stressed that such exploratory operations should be limited to the patient who has been investigated thoroughly and carefully. When the field is restricted in this way, it is our impression that this philosophy will not result in a wholesale blood-letting, especially since the percentage of patients is small who consent to operation after being told frankly that the procedure is exploratory.

As illustration of this fact, we have for the past three and a half years purposefully adopted the above philosophy. Over that period we have had only eleven patients who fulfilled the above requirements and who consented to exploration. Though this number is too small to warrant a detailed analysis, it may be of interest that four of the eleven cases had organic lesions, surgi-

cal treatment of which resulted in apparent cure. These four cases were a gastric ulcer in two cases (including Case No. 4 above), a single common duct stone in one case, and a Hodgkin's disease of the small bowel mesentery (Case No. 2 above). The seven cases, in whom no lesion was found, had smooth postoperative courses and were apparently none the worse for their ordeal. It is our impression, based on this small group of cases, that the program is a practical one.

CONCLUSION

Abdominal pain may be due to an organic lesion, not visualized by careful x-ray studies. Before they are extensive enough to be seen by x-ray, such lesions may have become incurable if malignant or cause serious complications even if benign. For this reason it is suggested that in a patient over forty years of age who develops, for the first time, persistent abdominal pain of unknown etiology, diagnostic investigation is not complete until laparotomy has been performed. If a physician of Osler's stature could make such a statement fifty years ago, this point of view should not be considered radical today.

THE DUTY OF A DOCTOR AS A CITIZEN

HARWELL G. DAVIS

President, Howard College
Birmingham, Alabama

It is an honor which I fully appreciate to be invited to speak to this organization.

It is also a pleasure to have this token of esteem by a profession with which my relationship has been close by reason of both friends and relatives. One of my uncles and one of my brothers-in-law were physicians and my son is now a member of this profession and your Society. Allied closely to the medical profession is pharmacy. At Howard College we have a Pharmacy School. A brother-in-law of mine was a pharmacist and my son-in-law is practicing that profession at present.

One of the greatest influences causing me to hold in high regard the medical profession was the privilege I had of close association, personally and politically, with a distant relative of mine, Dr. Samuel W. Welch, who served for many years as State Health Officer in Alabama.

Read before the Jefferson County Medical Society, Birmingham, October 3, 1955.

For three years as Assistant Attorney General and six years as Attorney General of Alabama, I was the legal representative of the Health Department. It was during this period that I became acquainted with the unique medical organization in Alabama, which, by statute, made the Medical Association of the State of Alabama the State Board of Health. It is my understanding that this is considered a model law, and I think that credit goes to Dr. Jerome Cochran and to his great successors, Dr. William H. Sanders and Dr. Samuel Welch, for the establishment and the maintenance of this law which has done so much to protect the health of the public in Alabama.

If, in discussing the subject suggested to me, namely "The Duty of a Doctor as a Citizen," I was required to name one person who exemplified in the finest manner the exercise of those duties, I would be inclined to name Dr. Welch, a man of great sterling character, of highest ideals, and un-

doubtedly a statesman in the political arena.

His justifiable pride in the medical organization and health laws of Alabama made him an evangel of its merits that carried conviction to the lay mind. So ably did he guard these medical laws and so well did he convince the Alabama Legislature that they were for the general welfare, that not once, so far as I can recall, during his long term as State Health Officer, were they seriously challenged by the political demagogue.

Dr. Lineberry, your President, suggested that I talk on the "Doctor's Duty as a Citizen" and I gathered that he wanted me to speak on his political duty.

The doctor, as well as every other good citizen, has a high duty politically if our democracy is to govern wisely and justly. It seems to me, however, that during the last several years circumstances have conspired to place on the medical profession a much larger responsibility of civic duty than is placed on the average citizen of Alabama.

The health laws which protect the public and the maintenance of standards for the medical profession, which is for the general welfare, are so closely interwoven with political philosophy and political action that the future of both could be destroyed by unwise and vicious legislation.

Secretary Wilson, formerly of General Motors, was criticized for stating, "What is good for General Motors is good for the country," because many construed it as expressing a selfish desire to favor the company of which he had been President. It cannot be denied that there are some who consider the medical laws of the State of Alabama as a system developed and operated solely in the interest of the doctors. Even if the system is in the interest of the doctors, we must find some way of making people understand that in this instance, "what is good for the doctors is good for the public."

We must always bear in mind this fact with which we must reckon, namely, that the political philosophy of the masses, with reference to our health laws and the laws which protect the standards of the medical profession, is going to determine to a great degree the method of your future practice, your efficiency in combating disease, and the health of our people. In my opinion,

there is no substitute for the political leadership of the doctors in successfully crushing the attacks made upon these laws and these standards.

It occurs to me as a layman to your profession that one of the reasons of the effort to socialize medicine, to weaken health laws, and to lower standards of preparation for the profession, other than those prompted by the selfish hope of gain, results from the existence of a widening gap of understanding between the doctor and the public.

At Howard College we seek to place the development of character in a position of first importance. Many of the writers seeking to make a contribution to suggesting a way to accomplish this goal begin with the premise that science has progressed so much faster than human relations that the progress of science endangers our very existence. We know that always danger, and sometimes destruction, results from out of balance conditions.

It seems to me that the medical profession finds itself somewhat in a similar situation. During the last decade the medical profession has advanced scientifically by great strides while a large mass of the people, who will determine finally our laws and our political philosophy, are living in the horse and saddle-bag age, so far as their idea of medication is concerned.

We must realize the fact that the close family relation and feeling of intimate friendship between doctor and patient, as represented by the famous painting of Sir Luke Fildes entitled "The Doctor," is not as representative of the status today as it was even fifteen or twenty years ago.

Your methods of practice have, within recent years, necessarily almost entirely changed. Where possible you have your patient brought to the clinic or to the hospital because only there is it possible to use all the scientific methods necessary to enable you to ascertain the condition which you should treat. But many a patient who still dreams of the home visitation method often assigns some other reason for this requirement.

Thus, in your effort to give greater protection and service to your patient, there has been created a condition which lessens the almost controlling influence of the doctor which he formerly, without effort, exercised upon the families constituting his

patients—an influence which almost unconsciously resulted in directing them in much of their thinking—a relationship and influence which caused the patient to always presume, whether he understood the reasons or not, that what the doctor advocated was for the welfare of the public.

May I be pardoned to mention what I have always considered one of the most interesting incidents of my life and which relates to Dr. Samuel Welch? A wealthy and extremely influential citizen in Southeast Alabama dammed the Conecuh River for the purpose of producing electric power without complying with the health regulations of the state. He flooded many acres of low lands without cleaning out trees and undergrowth.

Dr. Welch came to my office so outraged that the health of the people should be so endangered that it took a little time for him to state the reason of his visit which was to request that legal proceedings be brought to remedy the situation. I filed a suit for that purpose. Later, when I examined the pleadings of the defense, I found that one of the local doctors had filed an affidavit stating that the area flooded by the lake created by the impounding of the waters by this dam was full of sloughs and that the stagnant water in these sloughs raised more mosquitoes than was raised by the lake which covered this area.

When I presented these matters to Dr. Welch and advised him that I would need an answer to them, he was not as disturbed as I was about winning our case. A few days later a tall, lean man with a weathered appearance came to my office to discuss this situation. He was the engineer who had worked with General Gorgas in cleaning up the Panama Canal Zone. He had been to Andalusia, examined the affidavit, examined the lake and the area one mile around the lake. When I asked him about the doctor's affidavit he stated, "The doctor's affidavit is true." Then he added that, while the stagnant water of the sloughs produced a pestiferous mosquito, it did not produce the malaria-bearing mosquito, but that the lake did raise the latter. For the first time I was advised that an expert could examine the wiggle tails in the water and ascertain whether or not they would produce a malaria-carrying mosquito.

A statistical office maintained for ten

years by the Rockefeller Foundation in that section disclosed that there had been only one case of malaria in the area within that ten year period and the case was imported. Within a year after the impounding of the water on the Conecuh River and during the pending of the suit, there were over one hundred cases of malaria and one death. The lake was drained and compliance was made with the regulations of the Health Department.

Of course I realize that the matter of malaria being carried by mosquitoes bred under such conditions is now an old story to even the layman. The point of this incident is that thirty years ago a highly intelligent and, I believe, a good man was not sufficiently impressed with the soundness of the health laws and the rules and regulations promulgated under those health laws to compel him to comply with them until after he had witnessed the tragedy of over one hundred people attacked by malaria and one tow-headed boy, a lad in whom he was personally interested, die.

Again, it is imperative that you as a profession furnish the leadership that will shape the political philosophy of our people with reference to these matters. Somehow the ground of influence weakened by virtue of the necessary change of methods of practice to best care for patients, must be regained. In some way, with your profession leading, the good layman must be made to realize the necessity for maintaining in their integrity the health laws of Alabama and your present method of practice. You must bring to the masses of the public, which again I remind you finally determine political philosophy and action, the realization that these laws and these methods are essential to the public good.

I have some realization of how pressed a good doctor is for time to alleviate suffering and restore health. I can somewhat conceive the importance and the immediate urgency of such a cause. Yet, from a long range view, perhaps it is of still greater importance to maintain a political situation that has enabled your profession to make such marvelous progress in combating disease, and that serves to protect the health and lives of our people.

There is a phrase used in one of the early decisions of the United States Supreme Court that tersely states a great truth. The

issue was between the public good and private business. That sentence was this, "The people also have rights." Often in the pursuit of our specific duties we forget that the people also must be considered.

Recently I heard a Birmingham resident talking to a dairyman in the Black Belt. He asked the dairyman, "How in the world is the high price of milk in Birmingham justified?" and in the same question he said, "Are our health regulations to blame?" The dairyman replied, "The health regulations have something to do with it because Birmingham has perhaps as strict regulations governing the production and marketing of 'A' grade milk as any city in the United States and it takes a lot of money to provide properly for its production and it is expensive to market." But I was more interested in his concluding statement, which was this, "In my opinion, Birmingham is one city that refuses to permit the milk producers and vendors to gamble with the health and lives of its people."

When we are able to secure such an understanding of the reasons for our medical laws and our medical practice by laymen to your profession, the assaults upon this citadel of the public weal will die at birth. With Dr. Samuel Welch's ringing advocacy still fresh in my memory I fully remain convinced that the health laws of Alabama, the standards of your profession, and the methods of practice must be maintained and enforced in their present integrity else the people suffer.

It is realized that this is not a very profound statement. I also realize that you are not disappointed because you did not expect such. I have endeavored to bring to you a layman's conviction that you, as a doctor, have been placed in the peculiar position where your civic responsibility, politically as well as otherwise, is greater than that of any other person or profession with reference to maintaining the standards and laws relating to medicine and the public health; that upon your profession depends the leadership to prevent legislation that will be conducive to preventing you in the future from making the splendid progress you made during the last few years; that this duty to the public is as great as your duty to your patient.

The people also have rights.

Further Reason for Thorough Cooking of Pork Given—Findings of a recent study by two Yale University investigators have given further reason for making sure that pork is well cooked.

The study gave evidence that another disease, besides trichinosis, may be acquired by eating undercooked pork. The disease, toxoplasmosis, resembles pneumonia in its symptoms.

It was studied by David Weinman, M. D., and Anne H. Chandler, M. T., New Haven, Conn. Their report appeared in the May 19 Journal of the American Medical Association.

The researchers did not prove that eating undercooked pork is the only way of transmitting the *Toxoplasma*, but they felt that they had accumulated "very suggestive" evidence incriminating it as one transmitting agent.

The disease, caused by the protozoan *Toxoplasma*, is now "extremely common," they said, although 10 years ago it was considered to be rare. In fact, in some parts of the country from 30 to 70 per cent of the population in the 40 to 60 age group is infected, they said. Normally the disease is not severe and only acute cases receive much attention.

The method of its transmission is almost completely unknown. Toxoplasmosis is widespread among animals, especially pigs and rodents. It has been assumed that the infection is conveyed in some unidentified manner from animals to man—perhaps by an insect, by handling infected animals or carcasses, or by eating contaminated food.

They found that: (1) pigs can be infected with toxoplasmosis by eating infected rodents or pork scraps; (2) the rhesus monkey—the "conventional substitute" for man in experiments—can acquire the disease by eating infected pork; (3) persons who have trichinosis, which can be acquired only through eating undercooked pork, have a proportionately higher rate of toxoplasmosis than do normal persons.

Toxoplasmosis can occur in persons who do not have trichinosis. This means that, unlike trichinosis which can be transmitted only by pork, there is more than one source of toxoplasmosis, they said. Just what the other sources might be remains to be discovered.

In addition to demonstrating that pigs and rhesus monkeys can be infected, the investigators found through various tests that the *Toxoplasma* organism in pork can survive the usual temperatures and periods of pork storage. It survives in a cyst-like mass called a pseudocyst, which protects it not only from freezing, but also from the effect of gastric juices. This means that the organism might enter the body through the walls of the stomach, as well as through the walls of the mouth or the respiratory tract. Cooking will destroy the cyst and the *Toxoplasma*, they said.

They also found several factors which would aid in the spread of the disease and make it difficult to identify. Pigs, once infected, remained so for at least a year, while rats remained infected for at least seven months. The long persistence of an organism in the tissues helps its spread, especially in situations where the organism has several carriers, they said.

Magnesium Salts May Overcome Delirium Tremens—Magnesium salts—used to prevent “grass staggers” in cattle after early spring grazing—may also help overcome delirium tremens in chronic alcoholism, according to a report by the American Medical Association’s council on foods and nutrition.

The normal adult human body contains less than an ounce of magnesium, but a deficiency can produce muscle twitching, excessive nervousness, tremor, delirium, and even convulsions, Dr. Edmund B. Flink, Minneapolis, said in the report of the council in the April 21 Journal of the American Medical Association.

The human symptoms are similar to those produced in cows, calves, and horses suffering “grass staggers,” a magnesium deficiency illness usually occurring one to two weeks after the livestock begins grazing on new spring grass. Symptoms of “grass staggers” include nervousness, restlessness, grazing away from the herd, lack of appetite, muscle twitching, unsteady gait, spreading of the hind limbs, gnashing of teeth, a wild look, and constant lowing.

Chronic alcoholism appears to be an important cause of magnesium deficiency symptoms in humans, Dr. Flink said. The symptoms can also result from prolonged intravenous administration of magnesium-free fluids.

Patients with cirrhosis of the liver who have very low blood magnesium levels are particularly apt to develop serious nervous and mental symptoms when ammonium salts are given as part of their treatment, he said, but magnesium treatment may counteract this.

Low blood concentrations of magnesium have been found in malignant conditions, epilepsy, congestive heart failure, lupus erythematosus, hyperthyroidism, inflammation of the pancreas, asthma, infantile tetany, and severe starvation. Outward signs of the deficiency have been seen in connection with diabetic acidosis, severe kidney disease, and toxemia of pregnancy.

Administration of magnesium salt to alcoholics in delirium tremens appears to be helpful, and to benefit other non-alcoholic magnesium-deficient patients with tremor or delirium, he concluded.

Dr. Flink is from the Veterans Administration hospital and the department of medicine of the University of Minnesota Medical School.

Reasons for Suicide Attempts by Aged—Persons over 60 don’t attempt suicide because of social and family difficulties as frequently as younger people do, three St. Louis physicians said recently.

Attempts by aged people spring primarily from actual mental illness, they said in the March Archives of Psychiatry and Neurology, published by the American Medical Association.

They reported a study of 109 attempted suicides, of which 19 were by persons over 60. These included 14 men and five women. The doctors found that 17 of the aged patients had some specific type of mental disease and two were chronic alcoholics. The younger patients had a number of different diseases and 23 per cent of the cases could not even be diagnosed.

Since most of the aged patients were suffering a treatable or reversible disease, they could become useful citizens again if the underlying illness were overcome, they said.

Potentially disturbing situations, such as marital or financial difficulties or death of a loved one were much more frequent in the younger group than the older group. In fact, complaints of loneliness, finances, or hopeless physical conditions were rare among the aged patients, they said.

Genuine attempts were more frequent in the older group than in the younger group. This is related to the fact that serious suicide attempts occur most frequently in patients with manic-depressive psychosis, senile psychosis, or cerebral arteriosclerosis, which occur more frequently in older people, the doctors said.

* Twelve of the patients suffered either manic-depressive psychosis or acute organic disease of the brain. Both of these diseases are treatable or reversible. Therefore, the doctors recommended that immediate management of aged patients with these diseases who attempt suicide should consist of hospitalization in order to treat the underlying illness and prevent a subsequent suicide.

The doctors concluded from their study and a similar one conducted in England that loneliness, reactions to the aging process, feelings of uselessness, enforced unemployment, and the presence of serious physical illnesses are probably not alone sufficient to impel an older person to attempt suicide. Rather some definite psychiatric illness most always intervenes.

They pointed out that their study was concerned only with persons who attempted suicide and not persons who committed suicide. They did not know, therefore, how many of their findings would apply to a group of patients who actually commit suicide, but thought that patients whose attempts were designated as serious would be very similar to patients who commit suicide.

The study was made by Drs. Patricia O’Neal, Eli Robins, and Edwin H. Schmidt from the department of psychiatry and neurology, Washington University School of Medicine, and the St. Louis City hospital.

Physician Population Increases—Enough physicians to replace all the people in a town the size of Bisbee, Ariz., Powell, Wyo., or Pineville, Ky., were added to the total physician population of the U. S. in 1955, through the granting of licenses by examining boards.

The actual number of physicians receiving licenses for the first time in 1955 was 7,737, but if the nearly 4,000 physician deaths in 1955 are deducted, it leaves an increase of 3,800 in the total physician population.

This is about 450 fewer physicians than the 4,250 physicians added to the population in 1954, a record year, exceeded only by 1946.

The figures were published by the American Medical Association’s council on medical education and hospitals in the May 26 Journal of the A. M. A.

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THEY DIDN'T GET BACK

In 1955, more than fifteen thousand individuals didn't return home after the pleasures of the weekend. According to figures recently published by the Safety Service of The Travelers Insurance Companies of Hartford, Connecticut, 15,730 Americans were killed in weekend traffic accidents.

Of last year's traffic fatalities, more than one-fifth occurred on Saturday.

The reasons for this record number of weekend highway fatalities lie in the motor habits of the American public. Every highway in the nation has its Saturday share of that portion of America bound and determined to arrive at its weekend destination in time for dinner, even if the trip's last sixty miles must be covered in an hour flat. Too frequently, the strain and fatigue of distance driving are ignored in anticipation of ample relaxation at the journey's end.

Then, too, our highways continue to be filled with those drivers whose idea of relaxation is an extra drink or two "for the road."

Millions of dollars have been spent by Federal, state and municipal authorities in an effort to provide better and safer roads. Additional millions are spent by insurance companies and other private organizations for programs of safety education.

Nevertheless, the weekends of 1955 saw more persons killed and injured on our highways than ever before. It wasn't the fault of the road systems; it wasn't the fault of safety education campaigns. It was the fault of pleasure-bent individuals striving to go too far, too fast, for a weekend's enjoyment.

How to reduce this record total of killed and injured? What is desperately required is the immediate, unceasing cooperation of every American in possession of a driver's permit.

An aroused awareness of the weekend highway peril, plus continued realization of this danger, is the only way to reduce the weekend fatality figures for 1956.



GRADY O. SEGREST

Mobile

President of the Association

1956-1957

TRANSACTIONS OF THE ASSOCIATION

1956 SESSION
(Concluded)

Last Day, Saturday, April 21

The Association, sitting as the Board of Health of the State of Alabama, was called to order at 9:00 A. M. by the President, Dr. Frank L. Chenault.

The report of the Board of Censors was rendered by the Chairman, Dr. E. V. Caldwell of Huntsville.

**EIGHTY-SECOND ANNUAL REPORT OF THE
STATE BOARD OF CENSORS, INCLUDING
ITS REPORT AS A STATE BOARD OF MEDICAL
EXAMINERS AND AS A STATE COMMITTEE
OF PUBLIC HEALTH**

E. V. Caldwell, M. D., Chairman

PART I

The State Board of Censors has the honor to submit to the Association its Eighty-Second Annual Report.

THE PRESIDENT'S MESSAGE

The President, after expressing his deep appreciation for being honored by this Association, enumerates in part his numerous activities during the year of his presidency. He has attended meetings of the Board of Censors, the meetings of the Committee on Medical Service and Public Relations, and many meetings of groups allied to medicine. He called the first meeting of the College of Counsellors that was ever called, which was well attended.

When delving into the duties and functions of the various departments of the Association, he expressed concern that all departments should realize, and take seriously, their opportunity to serve and fulfill their duties to the fullest extent.

He expressed concern over the way illegals have been able to practice without licenses. He expressed concern over the present lack of the care of the indigent, and urged organized medicine to lead in the study of this important problem. He expressed concern over welfare and progress of our Medical College of Alabama. He endorsed the report of the Committee on Medical Service and Public Relations, which involves a forward step and radical change in the operation of this Association.

The Board commends the President for his various activities and recommends the adoption of the Message.

The Message was adopted.

REPORTS OF VICE-PRESIDENTS

Each of the Vice-Presidents reports one divisional meeting during the year with excellent programs, but with disappointing attendance. The competition of regional specialty meetings and of national associations is acute and each of the Vice-Presidents recommends either the expenditure of State Association money to acquire nationally known speakers or the discontinuation of regional meetings. The Board is loathe to see the regional meetings abolished, but would recommend that each Vice-President determine the feasibility of a meeting in his division.

Other recommendations from the Vice-Presidents are covered by individual committee reports. In order that Vice-Presidents can be fully aware of Association activities the Board wishes to extend to them an invitation to all Board of Censors meetings.

The reports of the Vice-Presidents were adopted.

REPORT OF SECRETARY-TREASURER

The membership of the Association remained at a high level of 1965. Forty one members, including a past president and a former member of the Board of Censors, were removed from the rolls by reason of death. The Association benefited from their membership and is the poorer through their passing on. Twenty-two physicians became eligible for the Fifty Year Club and were honored at this meeting. The Board congratulates them and wishes them many more years of service.

The finances of the Association are in good shape, although there was a slight excess of expenditures over receipts. The Treasurer should be authorized to invest funds from maturing bonds in other government issues and the Board so recommends.

The adoption of the report is recommended.

The report was adopted.

**REPORTS OF COMMITTEES
(Standing)****PUBLICATION**

The circulation of the Journal of the Association has continued to grow and it has maintained its high level of scientific content. The Journal offers an excellent medium for members of the Association to publish their papers.

The adoption of the report is recommended.

The Board's recommendation was adopted.

MEDICAL SERVICE AND PUBLIC RELATIONS

For some eight years the committee has been carrying on the work of the Association in a highly commendable manner. Much has been accomplished, but the committee feels that the time has now arrived for a radical change in Association activities.

The report indicates the immense amount of time and thought that has been devoted to our problems, and to their possible solutions. The Board concurs in the feeling that all members should pay dues and realizes the necessity of additional revenues.

The Board recommends adoption of the report.

An increase in dues being involved in this recommendation, there was discussion as to its immediate adoption, or whether a majority vote in favor of the increase should be sought from County Medical Societies. A roll call being asked for, the result was as follows:

For immediate adoption of the Board's recommendation: Counsellors Abbott, Barber, Barnes, Barrett, Baumhauer, Branch, Carter, Chenault, E. M., Chenault, F. L., Chenault, John; Clyde, Daves, Denison, Donald, Dan, Donald, Joe; Finney, Garber, Gill, Givhan, Glenn, Godard, Howell, Julian; Johnson, Jones, Kennedy, Littlejohn, Martin, Matthews, Moore, E. G., Morgan, Newton, Parker, L. L., Parker, Robert; Perdue, Riggs, Robinson, Rucker, Searcy, Segrest, Shell, Simpson, Snoddy, Timberlake, Treherne, Waters, Wilson, Frank, Wilson, W. E. *Delegates* Bradley, Brannon, Browne, Bursleson, Calix, Chambliss, Chitwood, Clemmons, Cummins, Doggett, Edwards, Emfinger, Galbraith, Hamilton, Hawkins, Harris, Johnson (Jefferson), Jordan, Kominek, Lawrence (Jefferson), Majure, McLaughlin, Michaelson, Odom, Payne, Pittman, Rudder, Rutland, Simpson, Strandell, Strickland, Underwood (Jefferson), Underwood (Franklin), Walker, Windham (Houston). Total 82.

For referral to the County Medical Societies: Counsellors Acker, Caldwell, Cannon, Collier, Crawford, Davis, John; Dodson, Gray, Hill, R. C., Isbell, Jackson, McCown, Moss, Nickerson, Salter, Smith, G. R., Weldon, Whiteside. *Delegates* Anderson (Tuscaloosa), Caffey, Cochrane, Cowart, Davis, Draughon, Hanks, Lightcap, Little, McBryde, Morgan, Mudd, Smith (Madison), Smith (Montgomery), Till, Williams. Total 34.

Therefore the recommendation of the Board, that the report be adopted, was concurred in.

The reader is referred to other actions under Ordinances Amended implementing this action.

MENTAL HYGIENE

Considerable progress has been made this past year in the field of mental health. The University has markedly expanded its department of psychiatry, and is developing a training program in the psychiatric field. The interest in mental health throughout the State is manifest and any program toward the prevention of mental illness or the betterment of the care of mental patients

will be supported by the citizens of the State.

The Board recommends adoption of the report.

The report was adopted.

MATERNAL AND CHILD HEALTH

The recommendations of the committee that more physicians assume the responsibility of immunization for the children of families in their care is concurred in by the Board. The Salk vaccine program has impressed the public with the need of immunization for poliomyelitis, but diphtheria, whooping cough, tetanus, and smallpox are continuing responsibilities.

A study of premature deaths has revealed much of interest and, although specific recommendations cannot be made, the necessity of having hospitals prepared to care for prematures is approved. Prenatal care would eliminate many of these cases.

The eighty-six maternal deaths during 1955 were all studied as to their cause and as to the type of obstetric care received. Toxemia of pregnancy headed the list of causes of death, with hemorrhage as the second cause. The prevention of the toxemias rests with good prenatal care, and this combined with conservative treatment at the time of delivery will eliminate some of these deaths.

The management of hemorrhage and of ruptured uteri is discussed and preventive measures outlined. The luncheon meeting of the Alabama Association of Obstetricians and Gynecologists, at which these maternal deaths were discussed, is a procedure to be highly recommended and one that should produce results in improved obstetric care.

The Board wishes to commend the committee on their activities and forward-looking program.

The report is recommended for adoption.

The recommendation of the Board was concurred in.

CANCER CONTROL

The incidence of and mortality from cancer continued to increase, and, unless there are radical new discoveries, Alabama can expect the increase to continue. The committee stresses the necessity of every physician being on the lookout for early symptoms of cancer since early diagnosis remains the greatest hope of cure.

The value of the indigent clinic service offered by the State is stressed and the contribution that the profession is making through staffing these clinics is highly commended. Suggestions for improvement are contained in this report.

The cooperation of the American Cancer Society in furnishing transportation, dressings, drugs, etc., has meant much in the success of the clinic program, and these activities are in addition to their principal objectives of education and research.

The Board joins the committee in its commendations and recommends adoption of the report.

The report was adopted.

PREVENTION OF BLINDNESS AND DEAFNESS

The committee reports definite progress in reducing the incidence of blindness and deafness. Several factors are concerned, such as:

(1) The restricted use of oxygen in pre-matures and its effect on retrolental fibroplasia.

(2) Increasing use of non-shatterable spectacles in hazardous industries.

(3) Availability of eye donor material when needed.

The Board is pleased to note these advances and recommends adoption of the report.

The report was adopted.

POSTGRADUATE STUDY

The report of activities in this field is disappointing to the Board. A total of only five assemblies during the year hardly justified the total expenditures. It is realized that there are ever-increasing opportunities for advancement through the numerous specialty meetings and through the Academy of General Medicine, so that the demand for seminars is limited.

The Board recommends that the annual grant of \$1000 from the Association funds be discontinued until such time as a better approach to this problem can be found. The Board expresses its appreciation for the efforts of this committee and hopes that in the future some other solution may be found.

The Board recommends adoption of the report.

The Board's recommendation was concurred in.

PHYSICIAN-DRUGGIST RELATIONSHIPS

The committee recommends to the Association at least annual meetings, at the local level, of physicians and druggists so that misunderstandings may be averted. The Alabama Pharmaceutical Association at its last convention adopted a large number of resolutions. Some of these have direct application to physicians and the committee has undertaken to evaluate this group. In most instances the committee concurs in the resolutions but feels that the physician's viewpoint on a number are at variance.

The Board recommends study of the committee report and recommends adoption.

The report was adopted.

ANESTHESIOLOGY

The increase in the number of physicians doing full-time anesthesiology is gratifying. Training courses offered by the Medical College and by the Lloyd Noland Hospital should be utilized by other members of the profession who devote part-time to this field.

The Board recommends adoption of the report.

The Association adopted the report.

TUBERCULOSIS

The continuing decline in the number of deaths from tuberculosis is very gratifying and is the reflection of improvements in therapy in recent years. Evidence as to a corresponding decrease in new infections is not available, at least in Alabama, and the problem of caring for these

individuals is still acute. Progress in the sanatorium field has been marked in the past year. The District IV Sanatorium at Gadsden became fully operative and the District VI Sanatorium at Mobile began operations. The increase in state subsidy to \$6 per day has enabled all of the sanatoria to provide better care for their patients.

The committee's suggestion that a study group be appointed to investigate the handling of recalcitrant patients in other states and formulate recommendations for Alabama is noted. This, it appears to the Board, would be in good hands if left to the Tuberculosis Committee and it so suggests.

The adoption of the report is recommended.

The Board's recommendation was adopted.

UNITED MINE WORKERS
MEDICAL CARE PROGRAM

The Board has considered carefully the report of this committee, and believes that the time has come to set up the proper machinery to deal with this program, and with similar problems that may develop in other areas of the State and with other industries. It therefore recommends adoption of the report.

The report was adopted.

REPORTS OF COMMITTEES
(Special)

INSURANCE

After long study and investigation of plans elsewhere and from various companies the committee has agreed upon and is recommending to the Association a plan of income protection for its members. The Board has reviewed this plan and recommends it to the membership for adoption.

A group plan of physician's liability (malpractice) has not yet been agreed upon, so cannot be considered by the Association at this meeting.

The Board concurs in the recommendation of the committee that the committee be continued; three members with overlapping terms, one to expire each year. The Board further recommends the establishment of county insurance committees in counties large enough to justify such a committee and with powers suggested in this report.

The Board heartily commends the committee for its efforts, and urges the membership to avail itself of the group protection offered.

Discussion relating to the possibility that the committee might have a group malpractice insurance plan to present shortly brought forth the conclusion that three members of the Board were authorized to act on the matter, whereupon the report was adopted.

AMERICAN MEDICAL
EDUCATION FOUNDATION

The committee reports a slight increase in the amount of money raised for the Education Foundation as compared to 1954 but urges greater support from the profession. Only a small percentage of physicians are including this worth-while foundation in their schedule

of contributions, although the needs of the medical schools are apparent.

The Board recommends adoption of the report.
The report was adopted.

AMERICAN CANCER SOCIETY

The Association is always pleased to receive from the Alabama Division of the American Cancer Society a report as to its activities. The amount of research being carried on in the State is very commendable and it is hoped that some of it may bear fruit. The University Medical School is continuing use of the research laboratory in the Public Health Building and has a number of young scientists following up promising leads.

The humanitarian task of providing dressings, drugs, etc., for those needing them is not a prime objective of the Cancer Society, but it is a very valuable by-product.

The Board calls attention to the films available to physicians and Medical Societies.

The expression of the Board was concurred in.

LEGISLATION

Since the last meeting of the Association the Legislature met in its regular biennial session and has also had several special sessions dealing with particular problems of the State. Among the matters of interest to the profession were (1) the renewed attempts of chiropractors to obtain their own licensing board—unsuccessful; (2) the various suggestions for changing the composition and responsibility of the State Board of Health—none enacted; (3) the proposal to put the funds from medical licensure (now reverting to County Societies) in the general fund—not enacted; (4) the proposal to require all hospitals to have "open staffs"—not enacted; (5) a constitutional amendment to provide funds for hospital construction—defeated in the December 1955 election; (6) proposals for the handling of the Salk vaccine—delegated to the Health Department; (7) appropriations for the operation of the Health Department—slightly raised, and (8) appropriations for the care of tuberculous patients at a rate of \$6 per day from state funds.

The complexity and magnitude of legislative matters is of vital concern to the Association and must demand continued vigilance if the safeguarding of the health of the people is to remain a function of the medical profession.

The Association concurred.

APPOINTMENTS TO BLUE CROSS-BLUE SHIELD

Since the term of Dr. J. G. Daves, Cullman, will expire February 28, 1957, and he cannot succeed himself, the Board nominated Dr. R. J. Guest, Jr., Fort Payne, to succeed Dr. Daves for a term of three years beginning February 28, 1957. Because Dr. Haywood S. Bartlett, Montgomery, will complete the unexpired term of Dr. T. Brannon Hubbard, resigned, February 28, 1957, the Board nominated him for a term of three years in his own right, beginning February 28, 1957.

The Board recommends approval by the Association of these nominations.

The Association approved the nominations.

PHYSICIANS' ADVISORY BOARD TO THE UNIVERSITY OF ALABAMA

Since the terms of Dr. W. C. Simpson, Florence; Dr. William C. Hannon, Mobile; and Dr. James O. Morgan, Gadsden, expire July 28, 1956, the Board nominated each to succeed himself for a term of five years beginning July 28, 1956 and expiring July 28, 1961.

The Board recommends approval of the nominations.

The nominations were approved.

MEDICAL ADVISORY BOARD TO THE SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

The Society has requested the Medical Association to appoint a Medical Advisory Board to assist in the determination of medical programs for the Society. It is therefore recommended that the President of the Association be empowered to appoint a committee of nine members, three to serve for a period of one year, three to serve for a period of two years, and three to serve for a period of three years. Annually thereafter the President shall appoint three members to serve for three-year terms.

The Board so recommends.

The recommendation was adopted.

INDIGENT MEDICAL CARE

The recent Legislature appointed a committee of its members to study the needs of Alabama in the field of medical care for indigents, and requested that this committee report at the next annual session, with recommendations. This matter is of vital concern to the medical profession of the State and this Association should provide leadership in working out plans. It is therefore recommended that the President of the Association appoint a committee of five members empowered to study this problem and to advise with the Legislative Committee and with other interested agencies to the end that Alabama may have a well planned, workable program.

The Board so recommends.

The Association adopted the recommendation.

RESOLUTIONS FROM MOBILE AND BALDWIN COUNTIES

These two county resolutions are in essence the same, and ask for a committee of five to seven from the Association to be appointed by the incoming President to carefully study the history, philosophy and provisions of the present Constitution of the State Medical Association to determine what, if any, alterations are necessary, and to report and to make appropriate recommendations at the next succeeding annual meeting of the State Association.

The Board recommends the adoption of these resolutions.

The recommendation of the Board was concurred in.

RESOLUTIONS FROM BLUE CROSS-BLUE SHIELD

Two resolutions from the medical representatives of Blue Cross-Blue Shield that the Association approve a service-type contract for individuals receiving less than \$2400 and for families receiving less than \$4800 were discussed at length. One proposal called for its inauguration in any county in which the Medical Society approved. The second resolution proposed the same contract on a state-wide basis.

The Board, after serious consideration, recommends to the Association non-concurrence in both these resolutions.

The matter was discussed by Drs. A. C. Jackson and J. H. Baumhauer.

Whereupon, the Board's recommendation was adopted.

ORDINANCES AMENDED

1. RELATING TO INCREASE IN DUES

Be It Resolved, That the ordinance of the Association entitled "Dues of Members and Counsellors" be amended to read as follows:

Section 1. Annual dues shall be \$50 for members of the Association, unless a member is specifically exempted by his County Medical Society, which amount shall be transmitted to the treasurer in accordance with the provisions set forth in Article XIV of the Constitution of this Association. (Amended 1948).

Section 2. Every Counsellor, other than Life Counsellor, shall pay annually into the treasury of the Association the sum of \$50; and every Life Counsellor, unless specifically exempted by his County Medical Society, shall pay the same dues as members of the Association; said amounts shall be transmitted to the treasurer in accordance with the provisions set forth in Article XIV of the Constitution of this Association. (Amended 1947 and 1948).

It is recommended that Section 3 be rescinded.

The amended ordinance was adopted by the Association.

2. RELATING TO REMISSION OF DUES

Be It Resolved, That the ordinance of the Association entitled "Remission of Dues" (adopted 1938) be and hereby is rescinded.

The ordinance was rescinded.

3. RELATING TO COMMITTEES

Be It Resolved, That Section 1 of the ordinance of the Association entitled Committees of the Association be amended to read:

1. Medical Service and Public Relations, composed of fifteen members, so grouped that the terms of office of three shall end each year, and with the president, president-elect and secretary of the Association and the State Health Officer as ex-officio members.

The amendment was adopted.

CONSTITUTIONAL AMENDMENT

RESOLUTION ON REAPPORTIONMENT

WHEREAS, In 1915, by unanimous vote, the Association amended its Charter and revised its Constitution to provide for the equitable representation of County Medical Societies; and

WHEREAS, Article V, Section 1 of the revised Constitution provides for each County Society to have the same number of delegates as that county has representatives in the lower house of the State Legislature with an additional delegate in those counties having only one representative; and

WHEREAS, Section 199 of the Constitution of the State of Alabama provides for the reapportionment of the members of the Legislature every ten years so that the number of representatives of the lower house for each county shall be based on the current federal census; and

WHEREAS, The allocation of delegates made in 1915 is no longer fair and just, since failure of the Legislature to comply with the provisions of the State Constitution has resulted in six County Medical Societies having an improper number of delegates, therefore be it

Resolved, That Article V, Section 1 of the Constitution of the Medical Association of the State of Alabama be amended to read as follows:

Section 1. (a) Until such time as new County Societies are granted charters, one hundred and six delegates shall be apportioned among the sixty-seven County Societies now in affiliation with the Association by the State Board of Censors according to the number of inhabitants in the respective counties as ascertained by the last decennial census of the United States, which apportionment, when made, shall not be subject to alteration until the next annual meeting of the Association after the next decennial census of the United States shall have been completed and published.

(b) When the number of delegates provided for in Section 1 (a) of this Article shall have been apportioned, each County Society which has been allotted one delegate by such apportionment shall be allowed one additional delegate so that no County Society shall have less than two delegates.

(c) In the event new County Societies are chartered by the Association each new Society shall be allowed two delegates and the number of delegates provided for in Section 1 (a) of this Article shall be increased by one for each such County Society as may be chartered.

(d) Until the State Board of Censors shall make an apportionment of delegates as provided in the preceding sections, the Medical Societies of the counties of Autauga, Baldwin, Barbour, Bibb, Blount, Bullock, Butler, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Cleburne, Coffee, Colbert, Conecuh, Coosa, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Fayette, Franklin, Geneva, Greene, Hale, Henry, Houston, Jackson, Lauderdale, Lawrence, Lee, Limestone, Lowndes, Macon, Madison, Marengo, Marion, Marshall, Monroe, Morgan, Perry, Pickens, Pike, Randolph,

Russell, St. Clair, Shelby, Sumter, Talladega, Tallapoosa, Walker, Washington, Wilcox, and Winston shall each have two delegates; and the Medical Societies of the counties of Etowah, Calhoun, and Tuscaloosa shall each have three delegates; and the medical society of Montgomery county shall have four delegates; and the Medical Society of Mobile county shall have seven delegates; and the Medical Society of Jefferson county shall have eighteen delegates.

This resolution, having been proposed in 1955 by the delegates from Mobile, is now ready for consideration. The Board recommends that Sections 1 (a), 1 (b) and 1 (c) be approved.

Section 1 (d) does not need to become a part of the Constitution, since the Board is prepared to reapportion the House of Delegates immediately in accordance with this change in the Constitution.

A recorded vote being necessary on a proposed constitutional amendment, the result was as follows:

For reapportionment of delegates: Counsellors Abbott, Barber, Barnes, Barrett, Baumhauer, Branch, Caldwell, Cannon, Carter, Chenault, E. M., Chenault, F. L., Chenault, John; Clyde, Collier, Crawford, Daves, Davis, John; Denison, Dodson, Donald, Dan, Donald, Joe; Finney, Garber, Gill, Glenn, Godard, Graham, Gray, Hill, R. C., Howell, Julian; Isbell, Jackson, Johnson, Jones, Kennedy, Martin, Matthews, McCown, Moore, E. G., Morgan, Moss, Newton, Nickerson, Parker, L. L., Parker, Robert; Perdue, Riggs, Robinson, Rucker, Salter, Searcy, Segrest, Simpson, Smith, G. R., Snoddy, Timberlake, Treherne, Waters, Weldon, Whiteside, Wilson, Frank, Wilson, W. E. *Delegates* Anderson (Tuscaloosa), Bradley, Brannon, Browne, Burleson, Caffey, Calix, Chambliss, Chitwood, Clemmons, Cochran, Cummins, Davis, Doggett, Draughon, Hamilton, Harris, Hawkins, Johnson (Jefferson), Jordan, Kominek, Lawrence (Jefferson), Lightcap, Little, Majure, McBryde, McLaughlin, Michaelson, Mudd, Odum, Payne, Pittman, Rudder, Rutland, Sellers, Simpson, Smith (Montgomery), Strandell, Strickland, Till, Underwood (Jefferson), Williams, Windham (Houston). Total 105.

Opposed to reapportionment: Counsellors Acker, Shell. *Delegates* Cowart, Emfinger, Galbraith, Smith (Madison), Walker. Total 7.

Therefore, the constitutional amendment was adopted; and the following apportionment of delegates made.

In accordance with Article V, Section 1, of the Constitution of the Medical Association of the State of Alabama, as amended, the State Board of Censors makes the following apportionment of delegates:

The Medical Societies of the counties of Autauga, Baldwin, Barbour, Bibb, Blount, Bullock, Butler, Chambers, Cherokee, Chilton, Choctaw, Clarke, Clay, Cleburne, Coffee, Colbert, Conecuh, Coosa, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Fayette, Franklin, Geneva, Greene, Hale, Henry, Houston, Jackson, Lamar, Lauderdale, Lawrence, Lee,

Limestone, Lowndes, Macon, Marengo, Marion, Marshall, Monroe, Morgan, Perry, Pickens, Pike, Randolph, Russell, St. Clair, Shelby, Sumter, Talladega, Tallapoosa, Walker, Washington, Wilcox and Winston shall each have two delegates; and the Medical Societies of the Counties of Calhoun, Etowah, Madison, and Tuscaloosa shall each have three delegates; and the Medical Society of Montgomery County shall have five delegates; and the Medical Society of Mobile shall have eight delegates; and the Medical Society of Jefferson County shall have nineteen delegates.

PROPOSED CONSTITUTIONAL AMENDMENT

Resolved, That Article VI, Section 6, of the Constitution of the Medical Association of the State of Alabama be amended to read as follows:

In consideration of having served the Association for twenty years, Life Counsellors, shall be released from the obligation of compulsory attendance upon meetings of the Association, imposed upon other Counsellors.

This proposed amendment to the Constitution, introduced at this session of the Association, must lie over for one year before it can be acted on.

It was so ordered by the Association.

Part I of the Board's report was approved as a whole.

PART II

REPORT OF THE BOARD OF CENSORS AS A BOARD OF MEDICAL EXAMINERS

In this field of its activities the Board submits the following statistical report for 1955:

Certificates of qualification granted.....	155
1. Physicians passing examinations June 21-23, 1955	88
(a) Certificates granted	7
(b) Certificates to be granted after internships	81
(c) Chiropody certificate granted.....	1
2. Physician failing to pass examinations June 21-23, 1955.....	1
3. Certificates granted applicants completing internships July 1, 1955	55
4. Physicians licensed by reciprocity.....	79
5. Diplomates National Bd. of Med. Examiners licensed	12
6. Commissioned officer USPHS licensed	1
7. Certificates of qualification to practice medicine revoked.....	3
8. Certificates of qualification restored	3
9. Physicians denied privilege of registering for narcotic stamps.....	5
10. Chiropody renewal licenses granted.....	38

CERTIFICATES OF QUALIFICATION GRANTED
JUNE 1955 APPLICANTS

Chapman, Joyce R.	Waddell, John R., Jr.
Driskell, John T.	Ward, Hartwell H.
Hamilton, John S.	Yielding, K. Lemone
Hollis, Knowlton L., Jr.	

CERTIFICATES TO BE ISSUED AFTER ONE YEAR
OF SATISFACTORY INTERNSHIP

Alford, Charles A., Jr.	Lokey, Robert H.
Bancroft, Josiah D.	Long, Robert T. L.
Battle, Earl P.	Lowe, Richard T.
Beaird, Joseph B.	McAdory, Wallace C., Jr.
Beavers, Fred W.	McElroy, James B.
Benton, John W., Jr.	McElroy, Travis R.
Brown, Howard D.	Mitchell, William S.
Camp, Charles L.	Moore, Ewing J., Jr.
Campbell, Ernest S., Jr.	Morgan, Charles C.
Campbell, Lamar M.	Mozley, Paul D.
Colvin, Charles H., Jr.	Nolen, Jack R.
Cox, Rabon B., Jr.	Null, Francis C., Jr.
Dean, William M.	Overstreet, Donald C.
Dillon, Hugh C.	Owens, Frank C.
Diseker, Maude	Patterson, Herman C.
Dowdy, Elizabeth G.	Pickering, John M.
Dowe, Calvin R.	Prosch, Gus J., Jr.
Finley, Sara W. C.	Rowe, Stephen W.
Fitts, Floyd O., Jr.	Rudd, George E.
Fitzgerald, Robert T.	Russell, Robert J.
Fulton, William F., IV	Sanders, Buford B.
Gay, Andrew J., Jr.	Sanders, Joe D.
Gibson, Herbert D.	Scofield, George F.
Gravlee, Leland C., Jr.	Selikoff, Eli
Hall, Joe Edward	Simpson, Oscar G.
Hinton, John L.	Singleton, Chester E.
Hodges, Durwood M.	Smith, Charles H.
Holding, Bruce F., Jr.	Steinberg, Morris
Holifield, Reese M.	Stewart, Walker B.
Holliman, James D., Jr.	St. John, James W.
Hubbard, John L., Jr.	Sturkie, Henry R., Jr.
Hudnell, Armstead B., Jr.	Sullivan, Percy G.
	Taylor, Thomas H.
Israel, Willis D. C.	Terry, Aubrey E.
Keel, Hollis C.	Thompson, James C.
Keeton, J. E.	Todd, John N., III
Kimbrough, John G.	Tyndal, Charles M.
Klein, Robert F.	Veazey, Charles F.
Knowles, John L.	Wells, Buren E.
Larrimore, Roy W.	West, Young U., Jr.
Litwin, Martin S.	Wilder, Guy B., Jr.

McGinnis, Gaston O.	Prescott, Cecil H.
Melson, Gilbert R.	Rattray, Charles F., Jr.
Mims, John Park	Roberts, Shaler S., Jr.
Moody, James E.	Robertson, James E.
Moseley, James R.	Sheffield, Lowell T., Jr.
Neeland, Eugene C.	Thomas, Robert L., Jr.
Okel, Benjamin B.	Thompson, Ira D.
O'Neal, Joe W.	Vickery, Robert E.
Pappas, William G.	Weaver, George H.
Phillips, Edwin J.	Whitley, Elton C., Jr.
Phillips, Frank P.	

RECIPROCITY APPLICANTS APPROVED DURING
THE CALENDAR YEAR 1955

Ager, Law L.—N. C.	June 13, '55
Benton, Mellanie C.—Md.	July 13, '55
Bodet, C. Adrien, Jr.—La.	June 21, '55
Bogges, John W., III—Ga.	June 24, '55
Boyett, James E.—Ga.	July 22, '55
Bradford, George T.—Ohio	Oct. 21, '55
Brinkley, Avery B.—Ga.	Aug. 26, '55
Butterworth, Joseph S.—Tenn.	Jan. 19, '55
Caveny, Elmer L.—Ga.	Feb. 14, '55
Cawthon, Kathleen S.—Va.	Mar. 28, '55
Cawthon, William U.—Va.	Mar. 28, '55
Chandler, John D.—La.	Nov. 21, '55
Collum, Tillman B.—Ark.	Mar. 28, '55
Cowley, Howard S.—Kan.	May 18, '55
Crandall, Homer L.—Ga.	Jan. 12, '55
Denton, James C.—La.	Aug. 12, '55
Dinkins, William B.—S. C.	July 8, '55
Dorrrough, Robert L.—Mo.	June 29, '55
Etheridge, Carl E.—Ark.	May 13, '55
Fisher, Albert—Ga.	Aug. 26, '55
Fuchs, Edwin M.—NBME	Dec. 16, '55
Gaba, James E.—N. C.	Sept. 23, '55
Gamble, Edward W., III—Va.	July 13, '55
Graham, Louis S.—Va.	Apr. 8, '55
Grant, William D.—Col.	May 24, '55
Hall, Billy T.—Tenn.	Jan. 10, '55
Hamilton, James L.—Tenn.	July 13, '55
Hendrick, James W.—Okla.	Dec. 2, '55
Hensleigh, John F.—Miss.	Aug. 12, '55
Hernandez, Rafael—Tenn.	Aug. 31, '55
Heslington, Hurston F.—Tenn.	Dec. 23, '55
Hibbett, Lester L.—Tenn.	Nov. 28, '55
Hirsh, Leon S.—Ohio	Mar. 1, '55
Jackson, Minter M.—Md.	July 8, '55
Johnson, Miles P.—Tenn.	Oct. 11, '55
Johnston, Furnie W.—Ga.	Nov. 7, '55
Johnston, William W.—Ark.	Mar. 21, '55
Kennedy, James A.—Ill.	Mar. 9, '55
Klingler, Harold H.—Tenn.	Mar. 15, '55
Lee, James E.—NBME	Dec. 12, '55
Letson, William M.—La.	Nov. 1, '55
Lewis, Robert A.—Tenn.	Oct. 28, '55
Light, Leland S.—Ill.	Apr. 20, '55
Lindgren, Roy P.—USPHS	Apr. 20, '55
Lochte, William P.—Texas	July 25, '55
Matthews, Robert R.—Tenn.	Oct. 21, '55
McCulloh, Hugh—Ga.	Oct. 25, '55
McDavid, William E., Jr.—Ga.	Jan. 7, '55
McEachern, Myron L.—Ga.	Jan. 31, '55
Merriam, Lucius B.—Tenn.	Oct. 10, '55
Metzger, William E.—Tenn.	Sept. 30, '55
Mitcham, Leroy—Tenn.	Aug. 31, '55
Moore, Lewis W.—Ga.	Aug. 12, '55
Morgan, James O., Jr.—Tenn.	Apr. 7, '55
Morris, John R.—NBME	May 11, '55
Pigford, Malcolm L.—Tenn.	Nov. 23, '55

CERTIFICATES GRANTED APPLICANTS COMPLETING
INTERNSHIPS JULY 1, 1955

Anderson, William R.	Hall, Harold J.
Angelich, James D.	Hammack, William J.
Azar, David A.	Hanahan, Marion L., III
Barnes, Glenn D.	Harris, Albert B.
Bentley, Herschel P., Jr.	Hollis, Charles J.
Blaylock, Harry I., Jr.	Hooper, Donald
Bradley, Eugene H.	Hundley, Richard Z.
Burke, Arnold C.	Jenkins, Howard D.
Carlin, John T., Jr.	Jordan, Bertis B.
Carnaggio, Vincent A.	Kahn, Donald R.
Cook, Ottis D.	Kenan, William O.
Cowsert, Elsie J.	Kominek, Robert L.
Crump, Charles H.	Kospetos, Kathrynne N.
Dudley, Robert H.	Landers, Bluit L., Jr.
Everett, Gerald W.	Leonard, Howard E., Jr.
Gaut, Zane N.	Lindsey, Arthur R.
Hagan, Andrew D.	Mann, Morris B.

Pitchford, John D., Jr.—Ga.	Aug. 19, '55
Powell, Daniel D.—La.	May 24, '55
Poznanski, Jean F. C.—Okla.	July 15, '55
Price, William T., Jr.—NBME	June 13, '55
Pritchard, Tyrus R.—Miss.	Mar. 4, '55
Pruitt, Thomas D., Jr.—La.	Nov. 18, '55
Reeves, Thomas J.—Texas	June 20, '55
Roth, Robert E.—Tenn.	Sept. 23, '55
Sewell, Price, Jr.—Tenn.	July 19, '55
Shaffer, Sylvester A.—Cal.	Jan. 3, '55
Smith, John T., Jr.—Tenn.	June 29, '55
Spira, Henry—NBME	Aug. 1, '55
Stephan, Warren F.—NBME	May 18, '55
Stewart, Charles C.—Ga.	Oct. 17, '55
Stitt, Frank, Jr.—NBME	Apr. 20, '55
Sussex, James N.—Kan.	June 20, '55
Tahir, Mohammad—Mo.	Mar. 22, '55
Tune, Leon J.—Col.	July 20, '55
Tysinger, Donald S., Jr.—N. C.	May 30, '55
Underwood, S. Jefferson—NBME	Aug. 31, '55
Veale, Norman C.—NBME	Aug. 12, '55
Vickers, William E.—NBME	Sept. 9, '55
Walters, Donald W.—Ohio	June 24, '55
Watson, Alfred L.—Tenn.	May 12, '55
Webb, Edwin Lee—N. C.	Jan. 31, '55
Wells, Leonard R., Jr.—Ky.	Aug. 12, '55
West, Ernest A.—Tenn.	Oct. 21, '55
Weston, Paul D.—S. C.	Jan. 10, '55
Whiteside, James A.—NBME	Sept. 30, '55
Williams, David J., Jr.—Md.	June 29, '55
Wilson, R. L.—Tenn.	Mar. 7, '55
Wiseman, Hollis J.—Ga.	Nov. 28, '55
Wright, Ralph D.—La.	Apr. 8, '55
Wright, Thomas W.—Tenn.	Aug. 19, '55
Yeager, Jack O.—Ark.	May 2, '55
Zukoski, Charles F., III—NBME	Dec. 6, '55

CHIROPODY RENEWAL LICENSES GRANTED FOR 1955

Alexander, Isadore H.	Lewis, Martin
AuCoin, William J.	Miller, Charles L.
Austin, Elizabeth S.	Miller, John
Benitez, George W.	Oxford, Herman R. A.
Blotzer, Ellen L.	Pearson, Joe P.
Blotzer, John S.	Peterson, Bessie C.
Clark, George E.	Plevine, Erich H.
Coleman, Jasper C.	Rae, Hugh
Coleman, John M.	Riccio, Peter D.
Crowley, Coy H.	Rollings, Harry H.
Crowley, Gentry B.	Sealy, Ariel L.
Davis, Edith M.	Sealy, Edward E.
Deviso, Viola	Silverman, Isidor
Dixon, Mildred K.	Veres, John G., Jr.
Draper, William L.	White, Juddie B.
Edwards, Charles M.	Wilton, Paul D.
Knowlton, Ira Lee	Wittick, Arthur, Jr.
LeCroy, Thomas H.	Wright, Thomas L.
Leighty, Fred G.	Young, Frank N.

Part II of the Board's report was approved.

PART III

REPORT OF THE BOARD OF CENSORS AS A STATE COMMITTEE OF PUBLIC HEALTH

D. G. Gill, M. D.
State Health Officer

The State Department of Health's progress in disease control along many broad fronts during 1955 is described in some detail in the reports that follow. Some facts stand out and perhaps

are more indicative of Alabama's forward strides in health than are other accomplishments. Undoubtedly, the status of tuberculosis towers among some others. For the first time in the State's history, tuberculosis is not among the 10 leading single causes of death. That disease claimed 70 fewer lives than in 1954. However, because there has not been such a dramatic drop in morbidity, tuberculosis remains a public health problem of some importance. Encouraging steps taken to handle the backlog and newly reported cases are the provision of many additional sanatorium beds. The 150-bed District IV Sanatorium at Gadsden opened its doors during January. A former federal government facility, the Marine Hospital at Mobile, was converted into District VI Sanatorium with 130 beds and the first patients were received during December. Moreover, District II Sanatorium at Tuscaloosa, with 150 beds, was approved for construction. An additional step toward control was taken by the 1955 regular biennial session of the Alabama State Legislature. Funds were appropriated to provide up to six dollars per patient per day for indigent care—the largest single contribution of State money for the control of tuberculosis in Alabama's history.

Alabama's death rate remained unchanged from the record low attained during 1954, and the birth rate declined slightly, while remaining well above the national average. A new low rate was recorded for infant mortality, and the maternal death rate was reduced by 22.5 per cent over that for 1954. The stillbirth rate was up slightly.

Mortality rates for certain communicable diseases reveal that work on these problems is a continuing need. There were 23 whooping cough deaths and 25 from diphtheria, slightly more than twice the tolls from these causes the year before that. There was a single typhoid fever death, where there was none in 1954, and three from measles as compared with 19 the year before. No deaths from malaria and scarlet fever were recorded.

The Department embarked on programs designed to make poliomyelitis vaccine available to eligible individuals. Early in the year the Department sponsored a voluntary, county-administered school inoculation project with vaccine made available by the National Foundation for Infantile Paralysis. Then, in August, Governor James E. Folsom designated the Department as the official administrative agency for federal funds appropriated for vaccine purchase. Alabama's voluntary poliomyelitis vaccine distribution plan was developed and set in motion under the direction of the administrative health officer. More details regarding both these programs, under which many Alabamians have received some protection against poliomyelitis, are set out in the following pages.

A new and needed area of service was developed with the launching of a veterinary public health section during the latter part of the year. The section is headed by a veterinarian on loan from the U. S. Public Health Service.

POLIOMYELITIS VACCINE DISTRIBUTION

On August 26, 1955, Governor James E. Folsom designated the State Department of Public Health as the responsible agency for the administration of the Federal poliomyelitis vaccination program in Alabama. The original allocation of 150,000 doses of vaccine purchased with Federal funds was distributed to the counties on the basis of their respective percentages of population in the age group 1 through 19 years. Subsequent allocations, giving a grand total of 261,143 doses, have been made.

The total inoculations reported under this program for the period ending December 31, 1955 were 144,352. The combined total of Federal polio vaccine inoculations and those performed with vaccine supplied by the National Foundation for Infantile Paralysis was 408,900 from a total of about 1,100,000 eligible population. A total of \$243,797 of Federal funds has been spent for vaccine and a balance of \$578,625 is available for further purchases under this program. This program has made available to each health department and physician in the State free vaccine to administer to anyone between the ages of 6 months thru 14 years and expectant mothers. Experience during the past three years has shown that approximately 85 per cent of our reported cases of poliomyelitis in Alabama fall within this age group, which, in general, comprises about 33 per cent of the population.

Alabama was fortunate during 1955 in having a rather low incidence of poliomyelitis. A total of 185 polio cases was reported, compared with 370 cases in 1954. Widespread utilization of the Salk vaccine as a preventive measure offers great hope that we may prevent major polio epidemic years in the future. The last high year was 1951 in which 695 cases were reported and 38 children died. In no case have we observed difficulty with polio vaccine such as occurred on the West Coast last year, and in no single instance has the vaccine been considered responsible for the initiation of a polio case in Alabama.

HOSPITAL PLANNING

The Division of Hospital Planning is responsible for the conduct of two distinct programs relating to hospitals—hospital construction and hospital licensure. The hospital construction program is carried out under the provisions of the Hill-Burton Act, as amended, and Title 22, Chapter 6, Article 4, Code of Alabama, 1940, and the hospital licensure program is authorized by Title 22, Chapter 6, Article 6, Code of Alabama, 1940. The Division, in addition to the two major programs, is responsible for civil defense casualty service planning.

During 1955 the Division visited every hospital and related medical facility in the State for the purpose of making a complete inventory and survey of the hospitals and related medical facilities. This information was compiled and presented in the 1955 revision of the *Alabama Hospital and Medical Facilities Master Plan*. This plan includes the 1955 revision of the original plan prepared in 1947 as it related to general hospitals, tuberculosis sanatoria, mental hospitals and public health facilities. The plan includes

for the first time nursing homes, diagnostic and treatment centers, chronic disease hospitals and rehabilitation centers as authorized by the 1954 amendments to the Hill-Burton Act. After approval by the Hospital Construction Advisory Committee, the State Board of Health, and after a public hearing, the plan was approved by the Surgeon-General, U. S. Public Health Service, and is the basic planning document for the conduct of the Hill-Burton program in Alabama during the 1955-56 Federal fiscal year.

HOSPITAL CONSTRUCTION

With the increase in Federal appropriations for the 1955-56 Federal fiscal year, the construction activities of the Division increased considerably over 1954 and may be expected to continue to increase in 1956. These activities are summarized in the following tables:

Table 1
Facilities Completed

Name	Location	Type	Beds
Arab Hospital	Arab	Gen.	20
Chilton County Hospital	Clanton	Gen.	40
Geneva County Hospital	Geneva	Gen.	33
Jackson County Hospital	Scottsboro	Gen.	35
Marengo County Health Center	Linden	PHC	...
Arab Health Center	Arab	APHC	...
Eastern Health Center	Birmingham	APHC	...
Montgomery County Health Center	Montgomery	PHC	...
District IV TB Sanatorium	Gadsden	TB	150

Table 2
Facilities Under Construction

Cullman Hospital (Annex)	Cullman	Gen.	64
St. Margaret's Hospital (Annex)	Montgomery	Gen.	95
Houston County Hospital	Dothan	Gen.	111
Huntsville Hospital (Annex)	Huntsville	Gen.	57

Table 3
Facilities Approved for Construction

Decatur General Hospital (Annex)	Decatur	Gen.	60
Piedmont Hospital	Piedmont	Gen.	20
Cherokee County Hospital	Centre	Gen.	27
Homer D. Cobb Mem. Hospital (Annex)	Phenix City	Gen.	50
Camden Hospital	Camden	Gen.	20
Tarrant City Health Center	Tarrant City	APHC	...
Marshall County Health Center	Guntersville	PHC	...

Table 3
(Continued)

Tuscaloosa County Health Center	Tuscaloosa	PHC	
Mobile County Health Center	Mobile	PHC	
St. Clair County Health Center	Ashville	PHC	
Walker County Health Center	Jasper	PHC	
Barbour County Health Center	Clayton	PHC	
Shelby County Health Center	Columbiana	PHC	
Tuscaloosa Branch Lab.	Tuscaloosa	PHL	
Mobile Branch Lab.	Mobiie	PHL	
District II TB Sanatorium	Tuscaloosa	TB	150

Table 4
Applications Received—1955

	Number	Beds	Estimated Cost
General Hospitals	2	50	\$ 321,000.00
Public Health Centers	4		378,000.00
Chronic Disease Hospitals	3	128	976,000.00
Rehabilitation Centers	1		83,000.00
Diagnostic and Treatment Centers	3		976,000.00
Nursing Homes	3	165	1,117,000.00
	16	343	\$3,851,000.00

In addition to the applications listed in Table 4, the Division has on file 43 applications received prior to January 1, 1955.

HOSPITAL LICENSURE

During the year 1955, a total of 241 facilities was licensed. Representatives of the Division made a total of 361 licensure inspections in addition to inspections made during the survey of hospitals and medical facilities. Licensure inspections revealed that only 18 of the 241 facilities had failed to meet minimum licensure standards in one or more particulars. Licensure activities may be summarized as follows:

Type of Facility	Licenses Issued
Hospitals	133
Clinic-Hospitals	28
Nursing Homes	79
Maternity Homes	1
Total	241

During the year, the Hospital Licensure Advisory Board conducted two meetings and authorized a thorough study of the licensure regulations for the purpose of raising the standards.

CIVIL DEFENSE

During 1955 the Division prepared the Health and Medical Services Annex to the State Civil Defense Plan and Manual HM-1, Basic Instructions for Organization of Casualty Services. After approval by the State Regional Liaison Committee, these documents were submitted to the State Civil Defense Department for approval and publication.

Other civil defense activities of the Division included work on Manual HM-2, Tables of Organization and Equipment for Casualty Service Units.

MENTAL HYGIENE

The program of the Division of Mental Hygiene operates on two levels—state and local. On the state level, program activities center about the nucleus of a staff including a director, a psychiatric social work consultant and a clinical psychologist consultant. On the local level, the program is carried out through County Health Departments, the University of Alabama and Tuskegee Institute.

A. State-Level Activities. The Division renders statewide community organizational activities, educational services, a grant-in-aid program to communities for clinical services, consultation and planning and statistical services.

1. Community Organizational Services. Members of the State staff assist local and State groups, such as citizen action committees on alcoholism, school systems, teacher groups, ministerial associations, etc., in developing their programs to include mental health concepts in better human relations methods.

2. Educational Services. "Alabama Mental Health" is a bulletin published nine months of the year and is geared to a readership of lay and semiprofessional people. Articles which appear in this bulletin deal with a variety of mental health topics and mental health activities. The Division operates a mental health film library consisting of 80 films. This library is very popular throughout the State and it is estimated that over 100,000 persons see these films annually.

In cooperation with the Alabama Association for Mental Health, State staff members participate in the training and orientation of State and local mental health association leaders.

3. Consultation Services. The Division of Mental Hygiene renders consultation to State and local agencies and organizations upon request. Special emphasis is now being directed toward consultation with the Departments of Education and Pensions and Security (Welfare), the State Health Department's Division of Public Health Nursing, and the Bureau of Maternal and Child Health.

B. Local-Level Activities—Mental Health Clinics. In the Division of Mental Hygiene's program are five mental health clinics, located in the following places: Birmingham, Montgomery, Muscle Shoals (Florence), Tuskegee and Tuscaloosa. As soon as personnel is obtained, a new service will be initiated in Gads-

den. These clinics offer clinical services to children and adults, consultation and educational services to agencies and to the lay public.

The State's four psychiatric clinics (excluding the University of Alabama Psychological Clinic) served 447 patients during the fiscal year 1955. About two-thirds (309) of the patients were children (ages 5 to 18). In serving these 309 children the staff rendered diagnostic service only to 134 (43 per cent), both diagnosis and treatment to 91 (30 per cent), and other types of service to 84 (27 per cent). The number of persons served and the types of service were definitely limited by the shortage of personnel.

Of the 309 children, 174 (56 per cent) were boys and 135 (44 per cent) were girls.

These children were referred to the clinics most often by the Department of Pensions and Security (formerly the Department of Public Welfare), second by the schools, and third by the family. In terms of adults, the source of referral was most often self, second family, and third the Department of Pensions and Security.

During 1956 and 1957 the following improvements will be attempted by the Division in the local-level program: (1) strengthening our clinics with additional personnel, (2) encouraging all local units to obtain more adequate local financing of their programs, (3) carrying out a more adequate statistical reporting system, (4) developing a systematic in-service training program for clinic personnel, and (5) further developing a working relationship with local agencies, particularly Departments of Education.

MACHINE TABULATION

The Division of Machine Tabulation continued in its capacity of a service unit during 1955. Work for the various bureaus and divisions of the Department was undertaken and completed regularly, and services were performed occasionally for some County Health Departments.

The regular weekly, monthly, quarterly, semi-annual and annual reports were compiled for the bureaus and divisions. In addition to this, the Reproduction Unit of this division turned out printing for all units of the Department and some county units.

In summary, the Division printed close to two million impressions, punched over one million I. B. M. cards, and checked them for accuracy. These cards were used numerous times for intermittent and manifold reports that are prepared as the cards are accumulated month by month.

On September 1, 1955 preparations were made to transcribe to punch cards the processing of poliomyelitis vaccination records. This was necessary to evaluate progress in the federally sponsored, state-administered poliomyelitis program. Extensive periodic reports have been required. Individual records by county of residence, age groups, and other data are immediately available on a total of 149,795 injections for the period ending December 31. A total of 122,762 of these was performed by local health

departments, and 27,033 by private physicians. Of these, 2,136 were expectant mothers, 96,410 were white children, and 51,249 were Negro children.

PUBLIC HEALTH EDUCATION

The Division during the year attempted to continue its program of preparation and dissemination of information for the public, and performed various other extra services as well.

Newspaper releases were issued daily to Capital City newspapers and to the wire services. These, as in the past, dealt with Alabama vital statistics, disease morbidity and special stories and events. The Division assisted in a special distribution project for releases dealing with the State's poliomyelitis vaccine program, whereby proposed newspaper articles were sent to County Health Departments and presidents of County Medical Societies prior to the article's release date. Montgomery newspapers used an average of about one release issued by the Division per day. No information is available on usage by newspapers in other parts of the State.

The Division continued to send out one brief release each week to dailies and weeklies in the State. Also, the State Health Chat was prepared for the State Health Officer, and released weekly to the Associated Press.

The weekly radio talk series was continued. The 15-minute scripts, as well as the tape recordings of them issued to cooperating radio stations, dealt with various diseases and conditions of public health importance. Mimeographed copies of the scripts were used extensively in fulfilling requests for information.

Records kept for the Division's film library reveal that films booked by users—County Health Department staffs, individuals and community organizations—were shown 685 times during the year. The estimated audience for these showings numbered more than 35,000.

The staff worked with individuals who came to the Division's offices requesting information on various subjects. In addition, inquiries received through the mails, averaging several a day, were answered and requested information was made available.

The director worked with other bureaus and divisions on the preparation of various reports and papers. Two special projects were worked with the public health veterinarian on a rabies brochure, and coordination of material for a publication produced and distributed to the 1955 Alabama Legislature. This booklet dealt with Alabama's public health needs.

COUNTY HEALTH WORK

During 1955 the Bureau of County Health Work was faced with serious problems of personnel and finance. It becomes increasingly difficult to maintain full-time county health officer service in all of the counties, only three health officers having been recruited during the year to replace one deceased, one incapacitated due to illness, and another who transferred from county to state service. Of the 34 full-time county

health officers serving during 1955, 15 were past 70 years of age. Twenty-one full-time health officers served single county units, 10 two-county units and three three-county units. Twelve counties were served by practicing physicians as acting health officers; and two counties, Lowndes and St. Clair, had no health officer service. Combinations of rural counties into two and three-county units, under the supervision of one full-time health officer, are being effected as rapidly as possible.

A serious shortage of public health nurses exists, with only one-third of the recommended standard of one nurse for each 5,000 population being employed in County Health Departments. During this year, 31 counties had only one public health nurse while one county had none.

Only two rural counties lacked the services of a sanitation officer. The remaining counties, although in a few instances inadequately staffed, suffered no acute shortage of this type of personnel.

Clerical personnel could be considered adequate throughout the State.

The 20 veterinarians, employed either on a full or part-time basis for meat or milk control services in strategic areas of the State, met the needs of this specialized service in a fairly adequate manner.

A real need for more adequate nursing and sanitation officer consultant services exists in rural counties. This need can be met only with additional State or Federal appropriations.

In the field of finance, the total of County Health Department budgets was \$2,562,890.00. Although this represents the largest sum ever made available for county health work, it amounts to only 82 cents per capita and is far below the desired figure of \$1.50 required to meet adequately the public health needs of the people. The continuing trend of increased budgets of County Health Departments is due entirely to increased local appropriations, since State and Federal grants have either remained static or have been reduced during the past few years. The total budget for county health work was composed of 69 per cent local, 16 per cent Federal and 15 per cent State funds.

The formula employed in distributing State and Federal funds to County Health Departments during 1955 was as follows:

Counties with population under 20,000—40c per capita

Counties with population of 20,000 to 29,999—35c per capita

Counties with population of 30,000 to 49,999—30c per capita

Counties with population of 50,000 to 79,999—25c per capita

Counties with population of 80,000 and more—20c per capita

As State and Federal funds available were insufficient to place the formula in full effect, the funds were prorated to the counties on the basis of 92 per cent of the formula.

A summary of services rendered by the County Health Departments in 1955 follows:

Communicable Disease Control

Admissions to service	1,039
Consultations with physicians	1,628
Field visits, total	3,701
Immunizations	344,205
Diphtheria, total	3,557
Pertussis, total	291
Smallpox	47,785
Triple vaccine D. P. T., total	115,381
Typhoid fever	175,394
Hookworm treatments	2,678

Venereal Disease Control

Cases, suspects admitted to service	12,715
Office and clinic visits	22,098
Field visits	12,892
Number of treatments given	9,713

Tuberculosis Control

New cases, suspects admitted to service	12,674
New contacts admitted to service	18,924
Office and clinic visits	67,317
Field visits	48,020

Maternity Service

Cases admitted to antepartum service	22,873
Office and clinic visits	48,658
Field visits to antepartum cases	17,873
Cases admitted to postpartum service	15,895
Cases given postpartum medical examination (clinics)	4,381
Office and clinic visits by postpartum cases	5,496
Field visits to postpartum cases	22,961
Maternal death investigations	12

Infant and Preschool Hygiene

Infants:	
Infants admitted to service	34,253
Office and clinic visits by infants	32,383
Field visits to infants	57,503
Neonatal death investigations	105
Preschool:	
Preschool children admitted to service	29,938
Office and clinic visits by preschool children	37,239
Field visits to preschool children	31,102

Polio Inoculations

First inoculation	220,885
Second inoculation	158,754
Third inoculation	2,086

School Hygiene

Pupils inspected	81,474
Pupils examined	5,857
Pupils admitted to nursing service	4,075
Field visits	10,764

Adult Hygiene—Medical Examinations

Milk and other food handlers	1,583
Other	3,561

Morbidity Service

Cases admitted to service	3,848
Office and clinic visits	4,172
Field visits	5,380

Cancer Control

Individuals receiving diagnostic service	1,001
Individuals receiving treatment service	1,621
Individuals admitted to nursing service	462
Field visits	1,305

Dental Correction Service

Individuals admitted to service, total	7,876
Office and clinic visits	13,711
Inspections by dentists or dental hygienists	8,304
Prophylactic treatments by dentists or dental hygienists	5,742

General Sanitation

Approved individual water supplies installed or protected	962
New privies installed	888
New septic tanks installed	9,395
Field and office visits	130,002

Protection of Food and Milk

Food-handling establishments registered for supervision	11,140
Field visits to food establishments	81,567
Dairy farms registered for supervision	3,168
Field visits to dairy farms	25,617
Milk and milk products plants registered for supervision	320
Field visits to milk and milk products plants	7,528

Special Control Services

Impounded water projects registered for supervision	4,149
Field visits to impounded waters	3,232
Premises and establishments dusted for typhus control	15,636
Field visits in typhus control	34,841

Laboratory

Specimens examined	485,100
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PUBLIC HEALTH NURSING

Central Staff. The staff consists of the director and four generalized consultant nurses. There was a resignation of one consultant who returned to school but she was immediately replaced. An experiment is being tried with this last employed consultant: she has been given a small district of five counties with nine nurses. She lives within the district and we hope to show improvement in the performance of the nurses due to this close supervision. One of the four consultants has been on sick leave most of the year.

The consultants have continued to hold positions of leadership in nursing and other organizations.

Staff Nurses in the Counties. Public health nursing staffs showed a little more stability than in the past, there being 30 lost against 53 gained. The reasons for the 30 lost include change of residence, lack of funds, pregnancy and sickness. Changes in nurses always pose a problem for the inadequate consultant staff, as each new staff nurse must have individual orientation in her own county and subsequent close supervision for a time.

The slight gain in nurses leaves us at the end of the year still with just about one-half the number required to give minimum public health nursing services to the citizens of Alabama.

Leaves of absence without pay create a problem, especially pregnancy leave, as it is impossible to fill these temporary positions. During the year, leaves without pay totaled 35 months. When accrued sick leave is added to this, it amounts to losing the services of three full-time nurses for a year. (These figures do not include Jefferson and Mobile Counties.)

In-Service Education. An additional burden is added to the consultant's work load due to circumstances which make it necessary for us to employ nurses unprepared in public health. Much time is spent in orientation and education. Three-fourths of the State is organized into groups which meet monthly for study and exchange of ideas. As practicable, other such groups will be so organized.

The University Centers are playing a big part in this education in making it possible for our nurses to take courses in public health nursing. During the year three nurses were moved into a higher classification after completing a designated number of such courses.

Although we had no general scholarship money for the State as a whole, time is allowed nurses to take advantage of courses, workshops and institutes, and the local tuberculosis associations were very generous in paying expenses of many nurses who took a summer course in tuberculosis nursing at the University of Alabama. Jefferson County was able to give study leave to four nurses who attended Peabody College.

Field Experience for Student Nurses. This division subscribes to the philosophy that education of nurses is a function that should be shared by public health agencies if we ever expect to employ nurses whose professional education has fitted them for first-level positions in public health nursing. Since we are primarily a service organization, our contribution along this line has, of necessity, to be limited. However, through arrangements with the University of Alabama School of Nursing and the Tuskegee Institute School of Nursing, regular affiliations in public health nursing were offered to senior students. Jefferson County gave field experience to three graduate nurse students from Peabody College. Student nurses from hospital diploma schools had varying types of experiences with local health agencies in Mobile, Birmingham and Sylacauga.

Peculiar to the nursing profession is the feeling of responsibility for recruitment to its own ranks. Consequently, student nurse recruitment is a by-product of the regular activities of most public health nurses, especially in connection with their school health programs.

Services. As a result of a course in school nursing attended the previous summer by 22 nurses, some new and extraordinary activity was evident. Quite a number of nurses are giving drugs for tuberculosis in the homes, but obviously they can go no faster than do the health

officer and the physicians in this new public health service. We were not unlike the remainder of the nation in spending a great percentage of time in the polio inoculation program. Interest in the cancer control program was considerably stimulated by attendance of two public health nurses and three hospital nurses at a week's course in cancer nursing.

Routine activities consisted of assisting other bureaus in carrying out their programs. This is especially true of the Bureaus of Preventable Diseases and Maternal and Child Health. All prenatal and infant clinics held in the counties are staffed with public health nurses, who also do the home visiting incidental to promoting this activity. Practically all case-finding and follow-up activities in the tuberculosis control program are carried on by local nurses.

One consultant was responsible for the majority of the polio vaccine clinics held in Crenshaw County as there was no nurse on duty. Consultants also assisted with this program in other counties, as well as with diphtheria immunization in Russell County. When consultants are used in this manner for direct service, their own functions are curtailed, but we realize the polio program interrupted all schedules, and we look forward to a levelling off of this activity.

Figures on home visits, inoculations, inspections of school children and various clinic activities appear under the respective programs elsewhere in this report.

MERIT SYSTEM

During 1955 the Merit System for County Health Work conducted competitive examinations on an open continuous basis for the following classes: Clerk I and II; Typist I, II and III; Scientific Aide; Sanitation Assistant; Public Health Veterinarian I; Milk Inspector I and II; Sanitation Officer I, II, III and IV. Several other examinations were open but no applications were received. Examinations for Graduate Registered Nurse I and II and Public Health Nurse I, II and III were closed during the year. A new examination for Public Health Nurse I, II and III was announced. The number of applications received for the above examinations totaled 134, of which 126 were acceptable and 121 appeared for the examinations (one withdrew). From this number, 107 applicants made a passing grade, 13 failed, and 107 names were placed on the eligible registers. There were 107 appointments (including original appointments, reallocations, and appointments from non-status to status) made from these registers and nine appointments from eligible lists previously established.

In addition to these, a total of 62 positions was filled on a provisional, temporary, emergency or custodial basis. There were 65 separations from service which included 34 resignations, 3 layoffs, 20 expirations of provisional, temporary, or custodial appointments, 2 deaths, 1 retirement and 5 dismissals.

The Merit System Council deleted Rule IV, Pay Plan, Rules and Regulations in its entirety and adopted new regulations for Rule IV, Pay Plan. The adoption of the new regulations involved changes in content and form of the Pay

Plan. Salary ranges for all classes were revised. A schedule of basic salary ranges established nine-step intervals from which County Health Departments selected a six-step range which was applicable to all classes employed by that department.

The Council also approved the following changes:

1. Change in title from Assistant to County Health Officer II to Assistant County Health Officer.

2. Deletion of the provision relative to age limit in Specifications for County Health Officer II and Assistant County Health Officer.

3. Deletion of classes for Scientific Aide, Sanitation Assistant and Dental Hygienist.

4. Revision of specification for Health Attendant.

5. Adoption of new classes, specifications and salary ranges for Domestic Worker, Custodial Worker and Sanitation Aide.

MATERNAL AND CHILD HEALTH

The Bureau of Maternal and Child Health continued efforts to improve health conditions for mothers and children to reduce the maternal and infant mortality rate in Alabama. Our maternity and well-baby clinics were well-attended, as were the dental clinics. The Bureau continued to furnish funds for pertussis and triple vaccine immunization to children, and stressed the importance of children receiving the vaccines during their first year.

The routine work of the Bureau proceeded despite several changes in personnel. The director resigned, effective September 1, to accept a new position; one nurse consultant resigned at the same time to attend school, and the bureau secretary was transferred to another office. The head of the Bureau of County Health Work served as acting director for the remainder of the year. The position of dental director remained unfilled.

The copper sulfate method for measuring specific gravity of blood and plasma and conversion into hemoglobin level which was instituted in the maternity clinics of nine counties is being continued and a study will be made to determine whether it is feasible to inaugurate this program on a state-wide basis. In other maternity clinics, where the local Board of Health allowed, iron deficiency anemia in the medically indigent clinic patients was treated through distribution of iron tablets through the clinics.

During 1955, 1,958 maternity clinics were conducted in 40 counties with 101 physicians participating and 34,748 patients admitted.

A total of 498 well-baby clinics was held in 17 counties, with 40 physicians participating and 9,258 children admitted.

A total of 1,070 dental clinics was held in 26 counties during the year. Sixty-six dentists served in this program and 9,888 patients were admitted.

The consultant nurses continued with staff conferences of public health nurses, oriented new public health nurses in various County Health Departments, and served in teaching and consultation capacity over a large area of the State.

One consultant nurse attended the Clara Elizabeth Fund for Maternity Health Classes in Preparation for Childbearing in Flint, Mich., as an observer. As a result of this observation, classes for parents in Preparation for Childbearing have been set up to begin in the new Montgomery County Health Center at an early date.

A midwife manual was prepared and will, in the near future, be used in the teaching of approximately 1,200 midwives over the State.

Members of the staff assisted in revising the County Health Departments' monthly report form. The revised form is designed to obtain more complete reporting. Also, it should eliminate multiple reporting.

Nutrition services carried on by this Bureau included talks and demonstrations concerning food at maternity clinics, crippled children's clinics, conferences with midwives regarding diets during pregnancy, workshops for school lunch workers, and food service conferences for dietary personnel in small hospitals and nursing homes.

A plan has been devised so that any small hospital or nursing home without a trained dietitian may obtain consultant service from some member of the State Dietetic Association by sending a request to the nutritionist of this Bureau or the Division of Hospital Planning.

The nutritionist works with classroom teachers in elementary grades concerning nutrition materials. She gives talks regarding foods to PTA groups and Girl Scout troops.

The Macon County Maternity and Infant Care Program continued to provide much-needed care for medically indigent, colored abnormal maternity cases, and premature or sick infants. There were 578 maternity patients and 309 prematures and sick infants under one year of age admitted through the Macon County Maternity and Infant Care Program for the year 1955. A total of 48 well-qualified physicians served as teaching consultants at the John A. Andrew Memorial Hospital in connection with this program during the year. These rotated in such a way as to have the services of four consultants each month.

LABORATORIES

The total specimens examined by the Bureau of Laboratories during 1955 was 514,939 as compared with 527,134 for 1954. Most of the decrease was in miscellaneous specimens. The number of these was 14,933 for 1955 compared with 30,739 for 1954. A decrease was also noted in specimens for intestinal parasites, agglutinations, rabies, milk and dairy products, and tuberculosis.

The first attempt at virus cultivation was made during the year. The cultivation and typing of poliomyelitis virus from clinically diag-

nosed cases were started June 1. Results of the work have been very encouraging and it is now felt that work in this field is limited only by the availability of supplies and an adequate number of trained workers. It was demonstrated that virus cultivation is practical in public health laboratories if equipment, personnel and supplies are available.

The Laboratories continued to be handicapped in some instances, particularly in the Mobile and Anniston Laboratories, by cramped quarters. The situation in Mobile is in process of being alleviated by the construction of new quarters, now under way.

The Central Laboratory functioned very smoothly during the year. For perhaps the first time in its whole history, adequate quarters and equipment were available. The Laboratories moved into their new building in October 1954 and were well-organized and functioning by the first of 1955. About the only factor limiting activities was personnel. The problem of limited personnel, coupled with rapid turnover, proved to be one of the Laboratories' greatest handicaps.

MONTGOMERY (THE CENTRAL) LABORATORY

Sanitation Division: Water samples examined were approximately the same as for the previous year. There was a slight increase in the number of milk samples for the year. The number of water samples was 3,788 as compared with 3,792 in 1954. The number of milk samples was 8,134 as compared with 7,580 for the previous year.

Microscopy Division: The total number of specimens examined for intestinal parasites was less than the year before. However, while the number of helminth examinations was less, the number of examinations for protozoa was greatly increased. The number of heads examined for rabies was slightly less than for 1954. The number of specimens for diphtheria increased from 763 in 1954 to 1,234 in 1955.

Serology Division: The total number of bloods and spinal fluids examined in this division was 73,839 as compared with 64,954 for the preceding year. This was an increase of approximately 10,000 specimens for the year. Of these, 9,270 were premarital bloods and 12,304 were bloods from projects conducted by the Bureau of Preventable Diseases. All bloods were examined by the VDRL test, which completely replaced the Kahn test in 1954.

Virology Division: The U. S. Public Health Service made available a grant to finance partially a program planned to isolate and type virus from clinically diagnosed cases of poliomyelitis occurring in the State. A decision was made for this Laboratory to participate beginning June 1. Prior to the beginning of the work, Mary B. Johnson and Mary Banks trained for the work in the Virus Laboratory of the U. S. Public Health Service in Montgomery. Hela cell transplants were obtained from the Virus Laboratory and a project to grow cells for the cultivation of the virus was inaugurated. A supply of Hela cells and many other necessary solutions and media were made ready for virus isolation in record time.

According to case history records, 11 of the strains isolated were from paralytic cases. Of the 123 specimens examined, only 15 were paralytic according to case histories. Thus, the virus was isolated from 11 of the 15 paralytic cases.

In addition to poliomyelitis virus isolation work, hemagglutination tests were done on 357 blood specimens for psittacosis. Of the 357 bloods, 57 were from parakeets and 300 from humans.

Bacteriology Division: A total of 4,004 specimens was examined for enteric infections during the year. Of this number, 112 *Salmonella* and 21 *Shigella* isolations were made. A total of 581 specimens for miscellaneous culture was examined. Cultures were made on 95 bloods for the isolation of *Brucella* organisms. Bloods examined by the agglutination test totalled 4,309.

Tuberculosis Division: This division examined 22,956 specimens as compared with 24,960 during the preceding year. Of the 22,956 specimens examined, cultures were made on 14,833. The number of positive cultures was 3,134. Other results were: 10,370 negative, 733 unsatisfactory, and 576 saprophytes. Guinea pig inoculations for tuberculosis totaled 534 with results as follows: 48 positive, 450 negative and 36 unsatisfactory.

Biologic and Media Division: Biologic and other products manufactured during the year were as follows:

Typhoid vaccine—219,050 ml.

Rabies vaccine, 1,023 human treatments—28,644 ml.

Sterile physiologic saline, tuberculin diluent—26,280 ml.

Silver nitrate ampoules—48,600

BRANCH LABORATORIES

Anniston: The Anniston Branch Laboratory examined 33,978 specimens in 1955 as compared with 31,782 during 1954. Dairy products and water samples accounted for approximately 1,000 of this increase. The additional number of specimens proved to be somewhat of a burden in view of the crowded quarters in which the Laboratory is confined. In addition to the increased number of specimens, most of the specimens for tuberculosis and for enteric infections were forwarded to the Central Laboratory, due to existing limited laboratory space. A decrease in the number of animal heads received for rabies tests as compared with previous years' totals was noted.

Birmingham: The Birmingham Branch Laboratory examined approximately 10,000 fewer specimens as compared with the previous year total. Miscellaneous specimens accounted for most of this decrease. There was a noticeable increase in the number of blood specimens for syphilis for the year. The total number of specimens examined, 200,521, was far in excess of the number examined in the Central Laboratory.

Decatur: The number of specimens examined showed a slight decrease as compared with 1954. Totals were 28,203 compared with 28,599 for the

previous year. The proportion of different specimens remained about the same as for the preceding year.

Dothan: The Dothan Laboratory examined slightly fewer specimens than were examined during 1954. Comparisons are 15,896 for 1955 and 16,260 for 1954. An increase in specimens for intestinal parasites was noted.

Huntsville: A slight drop in the number of specimens for the year occurred. The total of 17,382 was less than the 18,507 received during the year before. As a whole, the work load and specimen type percentages remained about the same as for 1954.

Mobile: Approximately 3,000 fewer specimens were examined than in 1954. A smaller number of specimens for intestinal parasites and bloods for syphilis serology accounted for most of the decrease. The Laboratory remained seriously handicapped by cramped quarters, a condition which should be remedied in another year when new quarters will be available. Inadequate facilities to handle the milk and water samples in the area continued to necessitate the sending of many samples to the Montgomery Laboratory.

Selma: The number of specimens examined in this laboratory was approximately the same as for the previous year. The number of blood specimens for syphilis was slightly smaller. The total for 1955 was 21,882 as compared with 22,864 for 1954.

Tuscaloosa: A comparison of specimens showed that 18,246 were examined during the year as compared with 21,053 for the previous year. Most of the decrease was in milk samples. The number of these dropped from 6,622 in 1954 to 4,489 in 1955.

PREVENTABLE DISEASES

The communicable disease picture had the same familiar pattern as in previous years with those diseases that have immunizing agents, except in a few instances, showing a downward trend, and the others reflecting their epidemic or nonepidemic status.

Poliomyelitis was either reflecting the effect of the vaccine given during the year, or was lying low for a possible five-year cycle increase in 1956. The 185 cases reported was the smallest annual total since 1947. Time will tell which forecast was correct, for the National Foundation for Infantile Paralysis vaccination program was limited to children in the first and second grades except in Montgomery County. In that county, because of its participation in the previous year's Salk vaccine field trials and study, the third grade was included. Out of the 180,594 eligible school children, 152,223 were vaccinated once, and 108,578 of these received a second inoculation. In addition, there were 3,915 children, out of the 4,126 who had received two inoculations under the previous year's Salk vaccine study, who were given booster injections. These 156,138 children who completed the vaccinations under the N. F. I. P. program repre-

sented about 62 per cent of the children in the first and second grades.

For diphtheria the picture was not as bright. Even though there is an excellent preventive, the diphtheria cases reported rose from 199 the previous year to 311 for the current one. Several counties reported sharp increases in the number of cases of this disease. This marked rise in cases brought about intensive drives in the immunization program in many counties. Part of the trouble has been that the number of children inoculated did not even equal the birth rate in most counties. If this intensification of protection and education can be maintained, diphtheria will begin to decline in the future.

Typhoid fever, with 41 cases reported, and paratyphoid with four cases reported, again reflect the effectiveness of continued antityphoid procedures. If education and vaccinations can be maintained, typhoid fever will drop to even lower levels in the future.

Infectious hepatitis continued its downward trend, aided and "pushed" by the gamma globulin program. There were 310 cases reported as compared with 441 cases for the previous year.

One case of rabies was reported but death had not occurred at the end of the year.

One case of malaria was reported and the diagnosis was on clinical evidence without laboratory confirmation.

Of the 6,017 cancer cases reported, 658 were treated in the six cancer clinics. Of the 1,503 individuals who applied for cancer services, 1,363 were given appointments and 1,097 of these reported to the clinics.

The mass x-ray program was carried to eight counties with 132,089 individuals x-rayed, and spot surveys were carried to seven counties with 10,728 x-rayed. From this 142,817 total, 175 new cases of tuberculosis were found. In the diagnostic clinics, 879 new cases were found in the 50,796 individuals x-rayed. All films were read for both lung and heart pathology, and 328 cases of heart disease and 94 suspects were found. In addition, there were 306 persons found with other lung pathology. Included were 40 suspected of having cancer of the lung.

Spot blood test surveys for syphilis were carried on in 20 counties, with 23,007 people tested. Out of this group came 208 cases of syphilis. From all sources, 2,164 cases of syphilis were reported. This figure was slightly larger than that for the previous year when 2,033 cases were found. Alabama, at the present time, is so close to what may be considered the irreducible minimum that this figure probably will fluctuate from year to year. But the 2,164 cases of syphilis compare very favorably with 32,507 cases in 1945.

VETERINARY PUBLIC HEALTH

A Veterinary Public Health Section of the Alabama State Department of Health was organized the latter half of 1955. This section serves many functions. Among them are consultation with the Bureau of Sanitation on disease problems relating to food of animal origin,

liaison with Departments of Agriculture and voluntary agencies, such as farm organizations. The most important function would be the promotion of activities to control animal diseases transmissible to man. There are more than 80 disease conditions common to man and animal.

The most important animal disease of public health importance existing in Alabama is rabies. In 1954 there were only two other states exceeding Alabama in the total number of reported cases of animal rabies. Each year over a thousand people received rabies vaccine treatment and the fear and mental anguish caused by this disease cannot be measured. At the request of the State Health Officer, the Veterinary Public Health Section began a state-wide survey of rabies control activities in order to determine measures that might be taken to better control and eliminate this disease. In order to better understand some of the unknown factors of transmission and spread of rabies, a cooperative research study was initiated in cooperation with the Bureau of Laboratories and the U. S. Public Health Service Virus and Rickettsia Laboratory. Much helpful information should be gained from this study.

Pertinent information and rabies statistics are being mailed periodically to practicing veterinarians, County Health Departments and other interested individuals.

SANITATION

PUBLIC WATER SUPPLIES

During 1955 the two engineers assigned to the Water Division accomplished more than has been accomplished in any other year since the division was organized. After conferring with the consulting engineers and reviewing plans and specifications, permits were issued for 75 major water works projects. The total estimated cost of these projects is approximately 12¼ million dollars. A large number of these projects were due to normal expansion or growth of the municipal water systems, while most of this construction was due to the water shortages or near shortages during the last two years. As additions to mains do not require permits, they are not included in the above estimated cost.

Forty-two of the 75 projects, and 29 that were under construction at the first of the year, were completed and placed in service. These completed facilities cost approximately six and one-half million dollars and they materially aided the municipal supplies in avoiding shortages. When the facilities are completed, usually one of the two engineers visits the water works, instructs the operator if necessary, and approves the construction.

At the end of the year, 33 projects were under construction. Some of these had just been started while others were practically completed. The cost of this work was approximately nine million dollars. When these contacts are completed, all or most all of the public supplies in Alabama should be in a position to meet the present and immediate future demands. There is, however, a possibility that unusual growth may place unforeseen demands on certain supplies; in such

cases the engineers will attempt to promote improvements before they are needed.

To carry out the State Board of Health's responsibility in connection with water supply supervision, 297 of the water plants were visited once, 27 were visited twice, four were visited three times, and four were visited four times during the year. This amounted to a total of 344 visits. During these visits, the general condition of the system, operating procedure, and bacteriologic and chemical quality of the water are noted. At the time of the visit operating personnel is given any necessary instructions in proper operational procedures and the responsible officials are conferred with regarding water works problems and needs. As a further control of quality, the engineers reviewed the reports of bacteriologic analyses of 22,286 samples submitted to the Bureau of Laboratories. When the interpretation of the reports indicated the need, instructions were given water works personnel so that the situation causing the unsatisfactory sample could be corrected.

The water shortage crisis appears to be solved by the additional facilities that were completed or are now under way. Albertville was the only large municipality that had an acute shortage during the year. Two emergency filter units were furnished by the U. S. Public Health Service and were installed for purifying the raw river water. The units were used for only a short period of time because rain came and eliminated the emergency. One of the engineers assigned to the Water Division was on hand during this emergency and rendered all possible assistance. The town of Pineapple had to haul water several weeks due to the failure of its well. A new screen was placed in the well and it is now producing sufficient water to meet the demands. An additional well is needed and will be promoted by the engineers.

Livingston began adding fluoride to the water in its system. This makes three municipalities fluoridating their public water supplies. Several others gave consideration to the addition and the subject continues to be much discussed.

The urgent need of additional personnel for water supply work heightened, as the largest number of projects in the history of this division was approved during the year. The number of semipublic and school supplies, serving many thousands of people but receiving little or no supervision from the State Health Department, continued to increase rapidly. Phases of the work, such as promotion of protected private water supplies, had to be neglected due to lack of personnel.

An outstanding short course school for water and sewage works operators was held at the University of Alabama. The school was attended by 110 persons and they were all enthusiastic in the classes and talks given. This training assists the water works engineers in instructing the operators and in promoting improvements to public supplies.

The Bureau, in addition, has assumed the responsibility of organizing and editing the Ala-

bama Water and Sewage Association's quarterly, the "Official Bulletin."

Water Division engineers continued to cooperate with the U. S. Public Health Service in the program of certifying supplies for use by interstate carriers. They also aided in the training of new sanitation officer personnel.

GENERAL SANITATION

The County Health Departments approved and reported to the Bureau of Sanitation the construction of 854 pit privies, 9,336 septic tanks, and 8,203 sewer connections, or a total of 18,393 new units of sanitation. This sanitation serves a population of 91,328. A total of 708 sanitation units serving a population of 4,249 was restored to former usefulness and protection to the public health. It is thus seen that 95,577 people were benefited by the installation of 19,101 units of sanitation. This also represents an increase of 1,402 units over the previous year and 4,346 units over 1953.

Cooperating with Departments of Education, sanitation was provided for 102 new schools. This is significant when it is realized that many of these are large rural consolidated schools requiring comparatively large sewage disposal systems. The Bureau has given direct technical assistance and actual field work on the design, layout and construction of these systems.

In cooperation with the Veterans Administration and Federal Housing Administration, 83 and 88 subdivisions, respectively, were investigated by personnel of the Bureau, and the method of sewage disposal and water supply was approved to these agencies. It is noted that this work represents a total of 171 subdivisions, containing 4,500 acres and 9,300 home sites.

The Bureau also cooperated with the Alabama Military Department in obtaining proper and adequate sewage disposal for all new armories constructed in the State during 1955.

INSPECTION ACTIVITIES

According to the Public Health Laws and Regulations of Alabama, the Division of Inspection has specific or implied responsibility for the inspection and enforcement of regulations governing the operation of approximately 18,938 establishments. These include 150 pasteurization plants and receiving stations, 2,600 dairies, 158 ice cream manufacturing establishments, 13,000 food establishments, 99 slaughter houses, 94 carbonated beverage plants, 69 poultry processing plants, 14 crab meat and shrimp cooking plants, 40 oyster shucking plants, 151 bakeries, 1,457 barber shops, 746 beauty shops, 194 hotels, and 164 tourist courts. It should be remembered that the majority of these establishments are engaged in the preparation, processing and handling of food and food products that are consumed not only in Alabama but are distributed throughout the nation.

Although sanitation personnel in 64 of the 67 counties participate in many of these programs, the limitation of technical and supervisory assistance at the state level has prevented the development of any one phase of these public health programs throughout the State. In 1954,

10 milk sheds were surveyed with only one failing to attain the acceptable rating of 90. Of the six milk sheds surveyed and rated in 1955, only one rated above 90. Information received from the County Health Departments revealed that only 13 counties have a county-wide milk code, and that 21 counties have no regulations whatsoever regarding the production, processing, distribution and sale of milk and milk products. The need for state-wide regulatory power is evident.

Food sanitation ratings were made in 9 counties in 1952, 18 in 1953, 4 in 1954, and 2 in 1955. In 1946, every county that had a food sanitation program was surveyed, including 9,000 joint State-and-county, as compared with 4,000 in 1955.

"Regulations Governing the Construction, Equipment and Operation of Poultry Slaughter Houses and Processing Plants" adopted January 13, 1954 by the State Committee of Public Health and amended April 20, 1955 are in operation and provide the basis for inspection of the 69 poultry processing plants in the State.

A law providing for the issuance of joint permits by the State and County Health Departments for the production, processing, handling and distribution of milk was approved by the Governor April 13, 1955. Considerable progress has been made under the provisions of this law to provide uniform health requirements for local production and imported milk.

An act approved September 17, 1953 providing for the issuance of a permit prior to the issuance of a privilege license for the operation of any establishment governed by the current food regulations has not yet been successfully administered throughout the State because of insufficient personnel.

VECTOR CONTROL

The Division of Vector Control performs the administrative activities required by the Regulations Governing the Impounding of Waters, provides technical advice to County Health Departments and local governments concerning the control of potential insect and rodent vectors of disease, and studies and promotes the elimination of environmental conditions which favor the production of disease vectors, such as mosquitoes, flies, rats and fleas.

During 1955, 1,195 additional impounded water projects were entered on record. The necessary inspections and reports were made jointly with representatives of Federal agencies on four major projects. Impounding of one of these, Demopolis reservoir, was completed. The raw condition of this basin, coupled with the cessation of flow in the smaller tributaries, resulted in heavy mosquito production in some localities and caused severe complaints. Studies of these conditions were made jointly with representatives of the U. S. Corps of Engineers, and recommendations for control measures were made.

Mosquitoes were unusually abundant in the southwestern part of the State during the early part of the season. Direct assistance was provided in making four mosquito surveys, includ-

ing one in Mobile and its environs. The usual system of checking and advising, in order to maintain Anopheles control, was carried on for 28 other major lakes in the State.

Under the direct or indirect technical supervision of this division, typhus control work, employing recognized antirat and antiflea methods, was done by five counties and by 25 municipalities. Insecticidal work to control flies and mosquitoes was done by two counties and by 25 municipalities.

Partly through the efforts of this division eight additional cities employed the sanitary landfill method of garbage disposal. Assistance and advice on this problem were given to a number of other cities including Birmingham.

The division was instrumental in establishing a vector control demonstration project in Gadsden by joint agreement with the city, the Etowah County Health Department, the State Health Department, and the U. S. Public Health Service, the latter agency proposing to provide substantial assistance for a period of two years. It is hoped that this project will be of great value as a state-wide demonstration in the maintenance of high standards of environmental sanitation in urban areas.

DRAFTING

The sketches, maps, charts, plans and other illustrative material which are prepared each year by the Drafting Section reflect graphically the work being done in the various bureaus. During 1955, statistical data for charts representing all phases of public health were recorded on permanent tracings. Charts and maps for annual reports, stencils, forms and all related material came into the section and were completed as promptly as possible, although the lack of sufficient personnel caused some delays.

The use of illustrative materials has increased and the recently installed Reproduction Unit has created additional demands on the Drafting Section.

In February a 46-page illustrated booklet entitled "Healthy People are Wealthy People," setting forth Alabama's public health accomplishments and needs, was prepared and presented to the Legislature in explanation of requests for appropriations for 1956 and 1957. This bulletin was well received, and it is an example of the trend toward interpretative and graphic information for easy and rapid assimilation.

A considerable amount of work was done for the Water Improvement Commission, including sketches, charts and forms for the numerous studies on stream pollution during the year. More than 75 forms showing results of laboratory determinations involving industrial wastes were made on permanent tracings.

New sanitary survey maps were made as required and all surveys sent to the Department were brought up-to-date.

Plans and profiles showing sewage disposal systems for 15 schools and Alabama National Guard armories were made during the year.

Exhibits were made for the annual meetings of the Medical Association of the State of Alabama, Alabama Public Health Workers Conference, the meeting of the A. S. C. E., and the sectional meeting of the Alabama-Mississippi Section of the American Water Works Association.

An article entitled "Storage for Large Maps and Plans," describing the design and installation of the special storage compartment for water and sewer plans for the Department, together with picture and detail drawing, was composed in the drafting room by the draftsman and submitted for publication. The article was featured in the October issue of the national publication "Water & Sewage Works."

More than 100 permanent linen tracings were made and filed in the section during 1955 and in addition to this a large quantity of material for reproductive purposes was prepared. This did not include the work on posters, placards, stencils and other illustrative material.

VITAL STATISTICS ACTIVITIES

Measured in terms of mortality, 1955 was another year of improved health. Infant and maternal death rates were further reduced to new low figures. There was an unprecedented low death rate for respiratory diseases. There were more homicides than tuberculosis deaths.

The Bureau of Vital Statistics received nearly 174,000 pieces of mail concerning records and statistics. Fees amounting to \$48,527 were collected for record certification services. A total of 102,149 certified copies was issued, including 5,095 gratuitous copies issued on request of the Veterans Administration. In 50,226 other cases, confirmations of record contents were furnished for purposes of proving age, citizenship, family relationship, etc.

Original vital records totaling 128,781 were filed in 1955 for the following events: 81,217 live births, 26,196 deaths, 1,871 fetal deaths, and 19,497 marriages. In addition, 10,078 reports of divorce and 38,994 reports of premarital physical examinations and blood tests were recorded. New certificates were prepared for 1,132 adoptions and 810 legitimations and 16,200 delayed certificates of birth were filed.

The Records Division processed 10,928 correction affidavits. A total of 4,093 queries (1,813 medical and 2,280 statistical) was mailed for the purpose of completing and correcting death certificates. Satisfactory responses were received in 3,121 cases. Special queries were made on 832 deaths reported as accident fatalities. Accident information was exchanged with the Department of Public Safety, State Fire Marshal, National Safety Council, and several local police jurisdictions.

VITAL STATISTICS TRENDS

Deaths

The general rate of mortality (8.1 per 1,000 population) remained unchanged from the record low which was reached in 1954. However, there was a slight increase in the number of deaths (26,196 last year compared with 26,051 in 1954).

Infant Deaths

A total of 2,602 babies less than one year of age died in 1955. Nearly 70 per cent (1,808) of the infants who died were less than one month old. Some improvement is noted here because infant mortality rates reached a new low point in 1955 (22.3 and 32.0, respectively, per 1,000 live births) for the neonatal and under-one year groups. Even more noteworthy was the marked reduction of infant mortality for birth injuries, asphyxia and infections. These causes resulted in 656 infant deaths in 1955 at a rate of 8.1 per 1,000 live births. For 1954 the comparable figures are 766 infant deaths at a rate of 9.4 per 1,000 live births. Immaturity at birth resulted in 518 deaths, a gratifying reduction from the 587 deaths from this cause in 1954. There was a higher incidence of whooping cough which resulted in 23 deaths in 1955.

Maternal Mortality

The mortality rate from maternal causes was reduced by 22.5 per cent in 1955. Diseases of pregnancy and childbirth caused 83 deaths at a rate of 10.0 per 10,000 deliveries.

Fetal Deaths

There was a slight increase noted in the number of fetal deaths with a corresponding upturn in the rate. A total of 1,871 fetal deaths was recorded at a rate of 22.5 per 1,000 deliveries, as compared with 1,852 at a rate of 22.0 per 1,000 deliveries in 1954.

PRINCIPAL CAUSES OF DEATH

For the first time in Alabama's history, tuberculosis was not among the 10 leading causes of death. There were more homicides last year than there were deaths from tuberculosis. The 10 leading causes of death accounted for 77.9 per cent of all deaths. There was a net reduction of 261 deaths in the toll taken by these major killers. The six leading causes maintained their usual rank order of importance with higher rates of mortality from heart diseases, cancer and accidents. Nephritis was displaced by diseases of the arteries as the seventh ranking cause of death. Homicide as a cause of death ranked in ninth place, well above congenital malformations and tuberculosis. Deaths due to pneumonia reached a new record low rate in 1955.

Leading Causes of Death

Causes	1955		1954		1949-1953	
	Number	Rate*	Number	Rate*	Number	Rate*
Heart diseases (includes hypertension)	8,451	260.8	8,227	256.8	8,061	259.8
Vascular lesions	3,395	104.8	3,423	106.8	3,211	103.5
Cancer	3,291	101.6	3,134	97.8	2,907	93.7
Accidents	1,883	58.1	1,837	57.3	1,860	59.9
Pneumonia	786	24.3	814	25.4	1,001	32.3
Immaturity**	518	6.4	616	7.5	746	8.9
Diseases of arteries	515	15.9	484	15.1	391	12.6
Nephritis	501	15.5	561	17.5	714	23.0
Homicide	368	11.4	366	11.4	406	13.1
Congenital malformations**	352	4.3	348	4.2	343	4.1
Tuberculosis	344	10.6	414	12.9	710	22.9

*Rate per 100,000 population

**Rate per 1,000 live births

Heart diseases, vascular lesions, nephritis and immaturity are not comparable to five-year average due to changes in coding procedures in 1949.

Communicable Diseases

Influenza maintained first place as a cause of death among the principal communicable diseases listed. There were no deaths attributed to malaria and scarlet fever reported in 1955. Erysipelas accounted for three deaths. The principal communicable diseases of childhood—

diphtheria and whooping cough—were active and resulted in more deaths than have been attributed to these diseases during each of several prior years. Poliomyelitis and meningitis mortality was lower than it has been during other recent years. There were only three deaths from measles.

Deaths Attributed To Certain Communicable Diseases

Causes	1955		1954		1949-1953	
	Number	Rate*	Number	Rate*	Number	Rate*
Influenza	172	5.3	181	5.6	287	9.2
Syphilis	75	2.3	100	3.1	145	4.7
Diphtheria	25	0.8	12	0.4	21	0.7
Meningitis	23	0.7	29	0.9	30	1.0
Whooping cough	23	0.7	11	0.3	28	0.9
Poliomyelitis	20	0.6	31	1.0	25	0.8
Encephalitis	6	0.2	4	0.1	7	0.2
Erysipelas	3	0.1	1	**	2	0.1
Measles	3	0.1	19	0.6	26	0.8
Typhoid and paratyphoid	1	**	0	---	2	0.1
Malaria	0	---	0	---	7	0.2
Scarlet fever	0	---	1	**	1	**

*Rate per 100,000 population

**Less than 0.05

Births

The birth rate which produced 81,217 babies (25.1 per 1,000 population) in 1955 showed a further decline. The relatively high birth rate, a low general mortality rate and prospects for further reductions in mortality point to a growing and healthier population.

Marriage and Divorce

Marriage registration in 1955 was nearly unchanged from the year before. A total of 19,497 marriages was recorded. A current national report discloses that Mississippi registered 66,413 marriages last year. Many thousands of these probably involved Alabama residents. Alabama

granted 10,078 divorces last year, a slight increase over the year before. In Mississippi only 4,424 divorces were granted.

Life Expectancy

According to life tables recently compiled for Alabama, this State now ranks 34th among the 48 in the expectation of life at birth for white males. This is the most favorable position our State has occupied. The expectation of life at birth is 65.98 years for white males; 72.21 for white females; 58.34 years for non-white males and 61.77 years for non-white females. We are aware that there are far more older people among us than ever before. A popular misconception about this observation is that older people are living longer

lives now than formerly. What has happened is that a baby born now has a better chance to live into old age. It is noteworthy that the remaining life expectancy at every age is longer than formerly, but the greatest improvements have been in the first year of life. Our decreasing infant mortality has improved our standing, but we have a continuing great challenge. In 1953, the most recent year for which national statistics are available, only 11 states had a white infant death rate higher than Alabama.

Part III of the Board's report was approved, as was the report as a whole.

REVISION OF THE ROLLS

The next order of business being the revision of the Rolls of the Association, the Secretary was directed by President Chenault to proceed without interruption in the absence of objection. As a preface to the revision of the Roll of County Societies, the Secretary said:

"County Medical Societies, to comply with the Constitution, must meet certain obligations. First, an annual report, on forms furnished by the Association, must be filed with the Secretary; second, each society is expected to be represented at the annual meeting by at least one delegate; and third, dues are to be remitted for each member not exempt from payment of dues."

With this foreword, the revision proceeded.

1. Revision of the Roll of County Societies:

(a) County societies which have fulfilled all their constitutional obligations: Autauga, Baldwin, Bibb, Blount, Bullock, Butler, Calhoun, Cherokee, Chilton, Cleburne, Clarke, Coffee, Covington, Crenshaw, Cullman, Dale, Dallas, DeKalb, Elmore, Escambia, Etowah, Fayette, Franklin, Geneva, Houston, Jackson, Jefferson, Lauderdale, Lawrence, Limestone, Lowndes, Macon, Madison, Marengo, Marion, Marshall, Mobile, Monroe, Montgomery, Morgan, Perry, Pickens, Pike, Shelby, St. Clair, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, and Wilcox. Total 51.

(b) County societies partially delinquent: In that annual report has not been received: Washington. In that they are not represented by delegates at this meeting of the Association—Barbour, Chambers, Choctaw, Clay, Colbert, Conecuh, Greene, Henry, Lamar, Lee, Russell and Winston. Total 13.

(c) County societies totally delinquent: Coosa, Hale, and Randolph. Total 3.

No objection being made as to the correctness of this report, the President directed the Secretary to write the societies delinquent in report and dues and, failing to remove the delinquencies, to call the societies to the attention of the State Board of Censors.

Whereupon the Roll of County Medical Societies was declared closed until the next annual session of the Association.

The Secretary then said:

"In revising the Roll of Counsellors, five lists are prepared, designated respectively: (1) the schedule of counsellors clear on the books; (2) the schedule of delinquent counsellors—counsellors delinquent in attendance or dues, or against whom charges may be pending; (3) the schedule of miscellaneous counsellors—counsellors who have died since the last annual meeting, or have offered their resignation, or have moved out of the state, or out of their respective congressional districts; (4) the schedule of active counsellors of twenty years' standing; and (5) the schedule of counsellors-elect who have qualified as provided in the Constitution."

With such preface, the revision of the rolls was continued.

2. Revision of the Roll of Counsellors:

(a) Counsellors clear on the books: Abbott, Acker, Allgood, Armstrong, Barber, Barnes, Baumhauer, Bell, Belue, Boyd, Bragg, Branch, Brown, Brunson, Carraway, Chenault, Cloud, Clyde, Cocke, Collier, Conwell, Crawford, Darby, Daves, Davis, J. W., and L. C., Denison, Dodson, Donald, D. C. and J. M., Finney, Foshee, Gibson, Gill, Gipson, Givhan, Godard, Golden, Gray, Grote, Guest, Hill, R. C. and R. Lee, Hollis, Holloway, Howell, Isbell, Jackson, Johnson, Jones, Kennedy, Killingsworth, Lisenby, Littlejohn, Matthews, Mazyck, McCown, McNease, Moore, Morgan, J. O., Neal, Newton, Nickerson, Owings, Parker, L. L. and Robert, Partlow, Riggs, Roan, Robinson, Samford, Segrest, Shell, Sherrill, Simpson, Smith, Stabler, Stallworth, Timberlake, Treherne, Underwood, Waters, Watson, Whiteside, Wilkerson, Wilson, F. C. and W. E., Woodruff, Woods.

In the absence of objection, the President ordered passed the names of these Counsellors reported as clear on the books.

(b) Delinquent Counsellors: None.

(c) Miscellaneous Counsellors:

(1) Life Counsellors who have died: Dr. W. G. Harrison and Dr. D. T. McCall.

(2) Active Counsellors who have died: None.

(3) Active Counsellors who have moved: Dr. W. P. Baston.

(4) Active Counsellors who have resigned: Dr. E. F. Leatherwood and Dr. J. A. Meadows.

(d) Active Counsellors of twenty years' standing: Drs. E. T. Brunson and R. C. Hill.

(e) Counsellors-elect who have properly qualified: Drs. M. E. Barrett, E. Byron Glenn, M. H. Lynch, J. E. Moss, W. T. Snoddy, Chas. L. Spann, and N. A. Wheeler, Jr.

The President directed that the names of the deceased Counsellors be transferred to the Book of the Dead; that Drs. E. T. Brunson and R. C. Hill be transferred to the Roll of Life Counsellors; and that to the Roll of Active Counsellors there be added Drs. M. E. Barrett, E. Byron Glenn, M. H. Lynch, J. E. Moss, W. T. Snoddy, Chas. L. Spann, and N. A. Wheeler, Jr.

He directed also that the names of Drs. W. P. Baston, E. F. Leatherwood, and J. A. Meadows be removed from the Roll of Active Counsellors.

Whereupon the Roll of Counsellors was declared closed until the next annual session of the Association.

3. *Revision of the Roll of Correspondents:*
John B. Youmans, Nashville, who delivered the 1956 Jerome Cochran Lecture, was added to the Roll of Correspondents.

4. *Revision of the Roll of Officers:*
Dr. John A. Martin, Montgomery, was chosen President-elect, Dr. William D. Anderson, Tuscaloosa, Vice-President of the Northwestern Division for a term of four years, and Drs. John W. Simpson, Birmingham, and J. Paul Jones, Camden, members of the State Board of Censors for terms of five years.

Committees constitutionally provided to nominate Counsellors brought in the following nominations, and the nominees were elected by the Association: 1st District—W. J. Barber, J. H. Baumhauer, G. O. Segrest. 2nd District—J. M. Barnes, C. G. Godard, R. W. Stallworth. 3rd District—J. Ralph Morgan. 6th District—D. R. Ramey, Jr., S. J. Williams. 9th District—John L. Carmichael, C. N. Carraway, H. Earle Conwell, John W. Simpson, Frank C. Wilson, S. Sellers Underwood.

RESOLUTION OF APPRECIATION

The following resolution introduced by Dr. Julius Michaelson was unanimously adopted:

Whereas, This annual session of the Medical Association of the State of Alabama has been a huge success both scientifically and socially, and

Whereas, The members of this Association are deeply indebted to those responsible for the success of this endeavor, now therefore be it

Resolved, That this Association express its profound appreciation and commendation to (1) the host Society, its president, Dr. E. Byron Glenn, and its several committees for their efforts in making our stay in Birmingham so pleasant; (2) the staff of the Thomas Jefferson Hotel for their many courtesies; (3) the Norwood Clinic for its gracious hospitality; (4) the newspapers and radio stations for their outstanding coverage of this meeting; (5) the exhibitors for their assistance in making this meeting a success; and (6) all others who have had a part in adding to our comfort, knowledge and entertainment.

Meeting of 1957

On behalf of the Mobile County Medical Society, Dr. Joe Little invited the Association to hold its 1957 meeting in Mobile. The invitation was accepted.

Installation of Officers

President-elect Grady O. Segrest was installed as President and, in accepting the gavel, presented the retiring President, Dr. Chenault, his past-president's pin. Dr. Segrest then installed his fellow officers—Drs. J. Paul Jones and John W. Simpson as Censors, Dr. John A. Martin, President-elect, and Dr. William D. Anderson, Vice-President of the Northwestern Division. There being no further business to claim the attention of the Association, the meeting was declared adjourned.

THE ROLL OF COUNSELLORS

REVISION OF 1956

LIFE COUNSELLORS

Name and Address	Date of Election
Alison, James F., Selma (4)	1934
Allison, Samuel Beekman, Minter (4)	1919
Anderson, Thos. J., Greensboro (6)	1933
Ashcraft, Virgil Lee, Reform (7)	1919
Bedsole, James G., Jackson (1)	1922
Brunson, Emmett T., Samson (3)	1936
Burdeshaw, Shelby L., Headland (3)	1921
Caldwell, Edwin Valdivia, Huntsville (8)	1918
Cannon, Douglas L., Montgomery (2)	1923
Carter, William R., Repton (2)	1934
Chenault, Erskine M., Decatur (8)	1935
Chenault, Frank L., Decatur (8)	1917
Craddock, French H., Sylacauga (4)	1932
Dabney, Marye Y., Birmingham (9)	1923
Eskew, M. H., Uniontown (6)	1934
Garber, James R., Birmingham (9)	1932
Granger, Frank G., Ashford (3)	1923
Gresham, George L., Opp (2)	1913
Gresham, Walter A., Russellville (7)	1933
Harris, Seale, Birmingham (9)	1903
Hayes, Charles Philipps, Elba (3)	1920
Hayes, Julius Pope, Clanton (6)	1920
Heacock, Jos. D., Birmingham (9)	1912
Heflin, Wyatt, Birmingham (9)	1893
Hill, Robert C., York (6)	1936
Hill, Robert L., Winfield (7)	1924
Hodges, Rayford, Scottsboro (8)	1935
Howell, William Edward, Haleyville (7)	1918
Howle, James Augustus, Hartselle (8)	1895
Hubbard, T. Brannon, Montgomery (2)	1924
Jackson, Alva A., Florence (8)	1918
Lester, Belford S., Birmingham (9)	1923
Lull, Cabot, Birmingham (9)	1919
Martin, John A., Montgomery (2)	1933
McAdory, Edward Dudley, Cullman (7)	1920
McLeod, John Calvin, Bay Minette (2)	1911
Oswalt, G. G., Mobile (1)	1929
Parker, Lorenzo D., Andalusia (2)	1933
Perdue, James D., Mobile (1)	1933
Ralls, Arthur W., Gadsden (5)	1919
Riser, William H., Lafayette (5)	1935
Rucker, Edmon W., Birmingham (9)	1922
Salter, Wilburn M., Anniston (4)	1934
Sankey, Howard J., Birmingham (9)	1914
Scott, Walter F., Birmingham (9)	1922
Searcy, Harvey Brown, Tuscaloosa (6)	1923

Smith, Gordon R., Ozark (3)	1934
Taylor, Woodie R., Town Creek (8)	1926
Thacker, Vincent J., Dothan (3)	1935
Thigpen, Charles Alston, Montgomery (2)	1900
Walls, J. J., Alexander City (5)	1924
Weldon, Joseph M., Mobile (1)	1935
Wilkinson, David Leonidas, Tuscaloosa (6)	1902
Total 53	

ACTIVE COUNSELLORS

Those marked with a † are serving last terms of six years.

Those marked with an asterisk (*) are serving second terms of seven years.

Those without a symbol are serving first terms of seven years.

The numeral is the number of the congressional district.

	Date of Elec- Expi- tion ration
Abbott, Chas. E., Tuscaloosa (6)	†1952 to 1958
Acker, Charles T., Montevallo (6)	†1951 to 1957
Algood, Homer W., Fairfield (9)	*1951 to 1958
Armstrong, James H., Selma (4)	1954 to 1961
Barber, William J., Butler (1)	†1956 to 1962
Barnes, J. Mac Ilwaine, Montgomery (2)	*1956 to 1963
Barrett, Maurice E., Decatur (8)	1955 to 1962
Baumhauer, Jacques H., Mobile (1)	*1956 to 1963
Bell, J. Mac, Mobile (1)	*1950 to 1957
Belue, Julius O., Athens (8)	†1951 to 1957
Boyd, Frank H., Opelika (3)	†1953 to 1959
Bragg, John C., Decatur (8)	†1955 to 1961
Branch, John L., Montgomery (2)	*1951 to 1958
Brown, Elridge T., Cleveland (7)	†1951 to 1957
Carraway, Chas. Newton, Birmingham (9)	†1956 to 1962
Chenault, John M., Decatur (8)	1954 to 1961
Cloud, Robert E., Ensley (9)	†1955 to 1961
Clyde, Wallace A., Birmingham (9)	*1954 to 1961
Cocke, William T., Jefferson (1)	†1953 to 1959
Collier, James P., Tuscaloosa (6)	†1954 to 1960
Conwell, H. Earle, Birmingham (9)	†1956 to 1962
Crawford, Jas. M., Arab (5)	1950 to 1957
Darby, Henry A., Athens (8)	*1954 to 1961
Daves, James G., Cullman (7)	†1952 to 1958
Davis, John W., Jr., Montgomery (2)	1954 to 1961
Davis, Lewis C., Gordo (7)	†1953 to 1959
Denison, George A., Birmingham (9)	*1950 to 1957
Dodson, Robert B., Cullman (7)	*1951 to 1958
Donald, Dan C., Birmingham (9)	*1951 to 1958
Donald, Joseph M., Birmingham (9)	*1953 to 1960
Finney, James O., Gadsden (5)	*1954 to 1961
Foshee, Reuben A., Alexander City, Rt. 4 (5)	*1951 to 1958
Gibson, Edward Lee, Enterprise (3)	†1954 to 1960
Gill, Daniel G., Montgomery (2)	*1954 to 1961
Gipson, Amos C., Gadsden (5)	*1951 to 1958
Givhan, Edgar G., Jr., Birmingham (9)	*1953 to 1960
Glenn, E. Byron, Birmingham (9)	1955 to 1962
Godard, Claud G., Fairhope (2)	†1956 to 1962
Golden, William C., Clanton (6)	*1951 to 1958
Gray, Hugh E., Anniston (4)	1954 to 1961
Grote, Carl A., Huntsville (8)	†1951 to 1957
Guest, Reuben J., Jr., Ft. Payne (5)	1953 to 1960
Hill, R. Lee, Haleyville (7)	†1953 to 1959
Hollis, Murray C., Winfield (7)	1951 to 1958
Holloway, H. Sellers, Notasulga (3)	1951 to 1958
Howell, Julian P., Selma (4)	1954 to 1961
Isbell, Arthur L., Albertville (5)	†1954 to 1960
Jackson, Albert C., Jasper (7)	†1954 to 1960
Johnson, Gayle T., Mobile (1)	1953 to 1960
Jones, J. Paul, Camden (1)	*1950 to 1957
Kennedy, Hughes, Jr., Birmingham (9)	*1950 to 1957
Killingsworth, Noah W., Brundidge (2)	†1953 to 1959

Llsenby, J. Otis, Atmore (2)	*1950 to 1957
Littlejohn, Wilmot S., Birmingham (9)	*1955 to 1962
Lynch, M. H., Scottsboro (8)	1955 to 1962
Matthews, Augustus D., Ozark (3)	1954 to 1961
Mazyck, Arthur, Dothan (3)	*1955 to 1962
McCown, William G., Huntsville (8)	*1954 to 1961
McNease, Benjamin W., Fayette (7)	*1954 to 1961
Moore, C. W. C., Talladega (4)	†1951 to 1957
Moore, Ernest G., Tallassee (4)	1954 to 1961
Morgan, J. Orville, Gadsden (5)	†1953 to 1959
Morgan, J. Ralph, Geneva (3)	*1956 to 1958
Moss, John E., Mobile (1)	1955 to 1962
Neal, Ralph D., Grove Hill (1)	*1955 to 1962
Newton, George E., Prattville (4)	1953 to 1960
Nickerson, Paul, Sylacauga (4)	1954 to 1961
Owings, W. J. B., Brent (6)	†1955 to 1961
Parker, Leslie L., Andalusia (2)	1953 to 1960
Parker, Robert, Montgomery (2)	*1955 to 1962
Partlow, Rufus C., Tuscaloosa (6)	*1950 to 1957
Riggs, Frank W., Montgomery (2)	*1950 to 1957
Roan, Avery M., Decatur (8)	†1955 to 1961
Robinson, E. Bryce, Fairfield (9)	*1955 to 1962
Samford, Millard W., Opelika (3)	*1953 to 1960
Segrest, Grady O., Mobile (1)	†1956 to 1962
Shell, James R., Abbeville (3)	1954 to 1961
Sherrill, John D., Birmingham (9)	†1953 to 1959
Simpson, John W., Birmingham (9)	†1956 to 1962
Smith, J. Donald, Eutaw (6)	1953 to 1960
Snoddy, William T., Jasper (7)	1955 to 1962
Spann, Chas. L., Dothan (3)	1955 to 1962
Stabler, Lorenzo V., Greenville (2)	†1951 to 1957
Stallworth, William A., Beatrice (1)	†1951 to 1957
Timberlake, Landon, Birmingham (9)	1952 to 1959
Treherne, Alfred J., Atmore (2)	1953 to 1960
Underwood, S. Sellers, Birmingham (9)	*1956 to 1963
Waters, Hinton W., Opp (2)	†1953 to 1959
Watson, Jerre, Anniston (4)	†1952 to 1958
Wheeler, N. A., Jr., Lafayette (5)	1955 to 1962
Whiteside, Maurice S., Cullman (7)	†1955 to 1962
Wilkerson, Arthur F., Marlon (6)	1950 to 1957
Wilson, Frank C., Birmingham (9)	†1956 to 1962
Wilson, William E., Russellville (7)	1953 to 1960
Woodruff, Gerald G., Anniston (4)	†1954 to 1960
Woods, Thomas B., Dothan (3)	1954 to 1961

Total 96

Note: J. Ralph Morgan was elected a Counsellor in 1943, lost one year because of change of residence, and was re-elected in 1956. His second term then ends in 1958, and his last in 1964.

COUNSELLORS-ELECT

Carmichael, John L., Birmingham (9)	1956 to 1963
Ramey, Daniel R., Jr., Greensboro (6)	1956 to 1963
Stallworth, Robert W., Evergreen (2)	1956 to 1963
Williams, Sidney J., Livingston (6)	1956 to 1963

Total 4

THE ROLL OF THE COLLEGE OF COUNSELLORS BY CONGRESSIONAL DISTRICTS

On this roll the names of the Counsellors are given by Congressional Districts. It is intended to serve as a guide in the election of new Counsellors, with a view to the distribution of them in approximate proportion to the number of members in the several districts. It is not considered to be good policy, and it is not considered to be fair and right, to give a few large towns greatly more than their pro rata share of Counsellors. The calculations are based on the nearest whole number. On April 1, 1956, there were 1963 members in the County Medical Societies. That would give one Counsellor to every 20 members. The membership set forth in the following is that of April 1.

FIRST DISTRICT

Names of Counsellors—W. T. Cocke, Marengo; W. J. Barber, Choctaw; R. D. Neal, Clarke; J. H. Baumhauer, G. O. Segrest, J. E. Moss, Gayle T. Johnson and J. Mac Bell, Mobile; W. A. Stallworth, Monroe; J. Paul Jones, Wilcox.

County	Members	Counsellors
Choctaw	7	1
Clarke	12	1
Marengo	11	1
Mobile	200	5
Monroe	7	1
Washington	3	0
Wilcox	9	1
	249	10

SECOND DISTRICT

Names of Counsellors—C. G. Godard, Baldwin; L. V. Stabler, Butler; R. W. Stallworth, Conecuh; L. L. Parker and H. W. Waters, Covington; J. O. Lisenby and A. J. Treherne, Escambia; J. L. Branch, F. W. Riggs, J. M. Barnes, Robert Parker, D. G. Gill, J. W. Davis, Jr., Montgomery; N. W. Killingsworth, Pike.

County	Members	Counsellors
Baldwin	22	1
Butler	11	1
Conecuh	8	1
Covington	25	2
Crenshaw	8	0
Escambia	19	2
Lowndes	4	0
Montgomery	146	6
Pike	16	1
	259	14

THIRD DISTRICT

Names of Counsellors—E. L. Gibson, Coffee; A. D. Matthews, Dale; J. Ralph Morgan, Geneva; J. R. Shell, Henry; C. L. Spann, Arthur Mazyck, and T. B. Woods, Houston; F. H. Boyd and M. W. Samford, Lee; H. S. Holloway, Macon.

County	Members	Counsellors
Barbour	12	0
Bullock	5	0
Coffee	10	1
Dale	12	1
Geneva	16	1
Henry	7	1
Houston	32	3
Lee	21	2
Macon	6	1
Russell	6	0
	127	10

FOURTH DISTRICT

Names of Counsellors—G. E. Newton, Autauga; Hugh E. Gray, Jerre Watson and G. G. Woodruff, Calhoun; J. H. Armstrong and J. P. Howell, Dallas; E. G. Moore, Elmore; C. W. C. Moore and Paul Nickerson, Talladega.

County	Members	Counsellors
Autauga	5	1
Calhoun	50	3

Clay	8	0
Coosa	3	0
Dallas	33	2
Elmore	11	1
St. Clair	9	0
Talladega	30	2
	149	9

FIFTH DISTRICT

Names of Counsellors—N. A. Wheeler, Jr., Chambers; R. J. Guest, Jr., DeKalb; A. C. Gipson, J. O. Finney and J. O. Morgan, Etowah; A. L. Isbell and J. M. Crawford, Marshall; R. A. Foshee, Tallapoosa.

County	Members	Counsellors
Chambers	16	1
Cherokee	2	0
Cleburne	3	0
DeKalb	13	1
Etowah	68	3
Marshall	27	2
Randolph	11	0
Tallapoosa	18	1
	158	8

SIXTH DISTRICT

Names of Counsellors—W. J. B. Owings, Bibb; W. C. Golden, Chilton; J. Donald Smith, Greene; D. R. Ramey, Jr., Hale; A. F. Wilkerson, Perry; C. T. Acker, Shelby; S. J. Williams, Sumter; J. P. Collier, R. C. Partlow and C. E. Abbott, Tuscaloosa.

County	Members	Counsellors
Bibb	5	1
Chilton	11	1
Greene	3	1
Hale	6	1
Perry	10	1
Shelby	16	1
Sumter	11	1
Tuscaloosa	70	3
	132	10

SEVENTH DISTRICT

Names of Counsellors—E. T. Brown, Blount; R. B. Dodson, J. G. Daves and M. S. Whiteside, Cullman; B. W. McNease, Fayette; W. E. Wilson, Franklin; M. C. Hollis, Marion; L. C. Davis, Pickens; A. C. Jackson and W. T. Snoddy, Jr., Walker; R. Lee Hill, Winston.

County	Members	Counsellors
Blount	10	1
Cullman	23	3
Fayette	7	1
Franklin	15	1
Lamar	8	0
Marion	11	1
Pickens	11	1
Walker	25	2
Winston	10	1
	120	11

EIGHTH DISTRICT

Names of Counsellors—M. H. Lynch, Jackson; H. A. Darby and J. O. Belue, Limestone; W.

G. McCown and C. A. Grote, Madison; M. M. Barrett, J. C. Bragg, A. M. Roan, and J. M. Chenault, Morgan.

County	Members	Counsellors
Colbert	21	0
Jackson	9	1
Lauderdale	42	0
Lawrence	7	0
Limestone	13	2
Madison	39	2
Morgan	34	4
	165	9

NINTH DISTRICT

Names of Counsellors—J. D. Sherrill, R. E. Cloud, C. N. Carraway, H. Earle Conwell, J. W. Simpson, F. C. Wilson, G. A. Denison, Hughes Kennedy, Jr., E. B. Glenn, D. C. Donald, Joe M. Donald, E. G. Givhan, Jr., H. W. Allgood, W. A. Clyde, E. Bryce Robinson, W. S. Littlejohn, S. S. Underwood, Landon Timberlake, and J. L. Carmichael.

County	Members	Counsellors
Jefferson	606	19

THE ROLL OF CORRESPONDENTS

"Distinguished members of the medical profession residing outside of the State, and Counsellors of the Association, who after not less than ten years of faithful service may have resigned their counsellorships, shall be eligible for election as Correspondents.

"Correspondents shall have the privilege of transmitting or presenting to the Association such communications, or scientific essays, as they may deem proper."—*From the Constitution.*

Name and Address	Date of Election
Andrew J. Coley, Oklahoma City	1909
Rudolph Matas, New Orleans	1921
Henry A. Christian, Boston	1921
H. A. Royster, Raleigh, N. C.	1926
G. Canby Robinson, Baltimore	1928
Russell L. Cecil, New York	1934
T. M. McMillan, Philadelphia	1938
George T. Pack, New York	1939
E. V. McCollum, Baltimore	1940
Harvey B. Stone, Baltimore	1942
Albert C. Furstenberg, Ann Arbor	1943
Alton Ochsner, New Orleans	1946
Reginald Fitz, Boston	1947
Andrew C. Ivy, Chicago	1948
Max Thorek, Chicago	1949
Paul D. White, Boston	1950
Emil Novak, Baltimore	1951
Richard Cattell, Boston	1952
Claude S. Beck, Cleveland	1954
Charles W. Mayo, Rochester, Minn.	1955
John B. Youmans, Nashville	1956

SCHEDULE OF THE ANNUAL SESSIONS
AND PRESIDENTS SINCE THE RE-
ORGANIZATION IN 1868

Place and President	Year
Selma—Albert Galatin Mabry	1868

Mobile—Albert Galatin Mabry	1869
Montgomery—Richard Frazer Michel	1870
Mobile—Francis Armstrong Ross	1871
Huntsville—Thomas Childress Osborne	1872
Tuscaloosa—George Ernest Kumpe	1873
Selma—George Augustus Ketchum	1874
Montgomery—Job Sobieski Weatherly	1875
Mobile—John Jefferson Dement	1876
Birmingham—Edward Davies McDaniel	1877
Eufaula—Peter Bryce	1878
Selma—Robert Dickens Webb	1879
Huntsville—Edmond Pendleton Gaines	1880
Montgomery—William Henry Anderson	1881
Mobile—John Brown Gaston	1882
Birmingham—Clifford Daniel Parke	1883
Selma—Mortimer Harvey Jordan	1884
Greenville—Benjamin Hogan Riggs	1885
Anniston—Francis Marion Peterson	1886
Tuscaloosa—Samuel Dibble Seelye	1887
Montgomery—Edward Henry Sholl	1888
Mobile—Milton Columbus Baldridge	1889
Birmingham—Charles Higgs Franklin	1890
Huntsville—William Henry Sanders	1891
Montgomery—Benjamin James Baldwin	1892
Selma—James Thomas Searcy	1893
Birmingham—Thaddeus Lindley Robertson	1894
Mobile—Richard Matthew Fletcher	1895
Montgomery—William Henry Johnston	1896
Selma—Barckley Wallace Toole	1897
Birmingham—Luther Leonidas Hill	1898
Mobile—Henry Altamont Moody	1899
Montgomery—John Clarke LeGrande	1900
Selma—Russell McWhorter Cunningham	1901
Birmingham—Edwin Lesley Marechal	1902
Talladega—Glenn Andrews	1903
Mobile—Matthew Bunyan Cameron	1904
Montgomery—Capers Capehart Jones	1905
Birmingham—Eugene DuBose Bondurant	1906
Mobile—George Tighlman McWhorter	1907
Montgomery—Samuel Wallace Welch	1908
Birmingham—Benjamin Leon Wyman	1909
Mobile—Wooten Moore Wilkerson	1910
Montgomery—Wyatt Heflin Blake	1911
Birmingham—Lewis Coleman Morris	1912
Mobile—Harry Tutwiler Inge	1913
Montgomery—Robert S. Hill	1914
Birmingham—Benjamin Britt Simms	1915
Mobile—James Norment Baker	1916
Montgomery—Henry Green	1917
Birmingham—William Dempsey Partlow	1918
Mobile—Isaac LaFayette Watkins	1919
Anniston—James Somerville McLester	1920
Montgomery—Louis William Johnston	1921
Birmingham—Dyer F. Talley	1922
Mobile—Walter S. Britt	1923
Montgomery—W. W. Harper	1924
Birmingham—J. D. Heacock	1925
Mobile—C. A. Mohr	1926
Montgomery—A. L. Harlan	1927
Birmingham—John D. S. Davis	1928
Mobile—E. V. Caldwell	1929
Montgomery—L. E. Broughton	1930
Birmingham—W. G. Harrison	1931
Mobile—Toulmin Gaines	1932
Montgomery—Samuel Kirkpatrick	1933
Birmingham—James R. Garber	1934
Mobile—William M. Cunningham	1935
Montgomery—Charles A. Thigpen	1936
Birmingham—Lloyd Noland	1937
Mobile—E. S. Sledge	1938

Montgomery—Seale Harris, Sr.	1939
Birmingham—M. S. Davie	1940
Mobile—Samuel A. Gordon	1941
Montgomery—James M. Mason	1942
Birmingham—Harvey B. Searcy	1943
Montgomery—Fred W. Wilkerson	1944
Meeting Cancelled—Walter F. Scott	1945
Birmingham—Walter F. Scott	1946
Birmingham—Carl A. Grote	1947
Mobile—Jesse P. Chapman	1948
Montgomery—J. Paul Jones	1949
Birmingham—Frank C. Wilson	1950
Mobile—Joseph M. Weldon	1951
Montgomery—T. Brannon Hubbard	1952
Birmingham—B. W. McNease	1953
Mobile—J. Orville Morgan	1954
Montgomery—Joseph M. Donald	1955
Birmingham—Frank L. Chenault	1956

SECRETARIES OF THE ASSOCIATION

1852-1854	George A. Ketchum
1854-1855	R. Miller
1869-1873	Jerome Cochran
1874-1876	B. H. Riggs
1879-1892	T. A. Means
1893-1897	J. R. Jordan
1897-1904	G. P. Waller
1904-1906	L. C. Morris
1906-1915	J. N. Baker
1915-1923	H. G. Perry
1923-1924	Douglas L. Cannon
1924-1930	B. B. Simms
1930-1940	Douglas L. Cannon

TREASURERS OF THE ASSOCIATION

1854-1855	W. P. Reese
1869-1898	W. C. Jackson
1898-1915	H. G. Perry
1915-1939	J. U. Ray

SECRETARY-TREASURERS OF THE ASSOCIATION

1940-	Douglas L. Cannon
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SCHEDULE OF JEROME COCHRAN LECTURERS

1899—J. T. Searcy, Tuscaloosa—What Is Insanity?
1900—Wm. Osler, Baltimore—Not present.
1901—Wm. Osler, Baltimore—Not present.
1902—Nathan Bozeman, New York—Declined.
1903—George H. Price, Nashville—The History of Medicine.
1904—W. S. Thayer, Baltimore—Cardiac and Vascular Complications of Typhoid Fever.
1905—Robert Abbe, New York—The Problems of Surgery.
1906—Joseph Collins, New York—Arteriosclerosis.
1907—Nicholas Senn, Chicago—Final Triumph of Scientific Medicine.
1908—E. L. Marechal, Mobile—Absent.
1909—Lewellys F. Barker, Baltimore—Clinical Methods of Cardiac Investigation.
1910—Frank S. Meara, New York—Some Problems of Nutrition in Early Life.

1911—Rudolph Matas, New Orleans—Inflammatory Tuberculosis.
1912—Maurice H. Richardson, Boston—Elimination of Preventable Disasters from Surgery.
1913—L. L. Hill, Montgomery—Surgical Complications and Sequelae of Typhoid Fever.
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Oliver, R. K., Montgomery
Osment, L. S., Birmingham
Owens, A. H., Jr., Birmingham
Owsley, W. S., Opelika

P

Pardue, W. O., Jr., York
Parker, M. V., Montgomery
Parsons, W. C., Birmingham
Patrick, K. H., Jr., Tuscaloosa
Patton, W. B., Mobile
Peake, J. D., Mobile
Pennington, J. A., Whistler
Perry, E. B., Birmingham
Perry, G. T., Brewton
Pfeiffer, R. B., Birmingham
Phillips, C. W., Jr., Birmingham
Phillips, Doris, Birmingham
Pitt, C. K., Decatur
Pitt, McCoy, Decatur
Pitts, E. B., Birmingham
Powell, C. P., Birmingham
Powers, A. D., Athens
Prescott, J. L., Birmingham
Prescott, W. E., Jr., Birmingham
Pryford, M. L., Birmingham

R

Ramey, C. W., McCalla
Ramey, D. R., Greensboro

Ray, Weldon, Bessemer
Rea, R. C., Sylacauga
Reagan, Cas, Birmingham
Reaves, J. U., Mobile
Relfe, C. B., Montgomery
Rennings, W. W., Clanton
Reynolds, W. F., Montgomery
Richard, J. S., Cullman
Richard, L. S., Birmingham
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Robinson, C. R., Bessemer
Rogers, H. L., Albertville
Rogers, M. R., Bessemer
Rosen, H. L., Montgomery
Rosser, W. J., Birmingham
Rowe, Mercer, Gadsden
Rumpanos, S. N., Mobile
Russell, R. O., Birmingham

S

Schilleci, V. J., Bessemer
Schneider, H. J., Birmingham
Schwartz, F. F., Birmingham
Scott, W. F., Jr., Birmingham
Sellers, H. G., Birmingham
Sellers, N. E., Anniston
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Shannon, P. W., Birmingham
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Silberman, D. J., Birmingham
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Sims, J. A., Talladega
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Smith, T. L., Birmingham
Smith, W. H. Y., Montgomery
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Stabler, A. L., Birmingham
Stabler, E. V., Greenville
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Stanton, R. F., Jr., Birmingham
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Stewart, Vera B., Birmingham
Stinson, W. E., Siluria
Stitt, Frank, Cullman
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Sweeney, D. B., Birmingham

T

Tarwater, J. S., Tuscaloosa
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Terhune, S. R., Birmingham
Terry, C. D., Mobile

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Thuss, W. G., Jr., Birmingham
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Tucker, W. C., Birmingham
Turlington, L. F., Birmingham
Turner, W. H., Dothan

U

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Underwood, N. P., Russellville
Upchurch, S. E., Birmingham
Ussery, G. C., Roanoke

V

VanSant, T. E., Piedmont
Vesely, D. G., Birmingham
Viar, W. N., Birmingham

W

Wainwright, S. P., Birmingham
Walker, A. M., Tuscaloosa
Walker, J. H., Birmingham
Ward, J. A., Jr., Birmingham
Ward, J. K., Birmingham
Warren, C. M., Mobile
Waters, H. W., Jr., Montgomery
Weaver, J. A., Birmingham
Welburn, J. C., Fairfield
Weldon, J. E., Birmingham
Welton, F. B., Vernon
Whatley, G. B., Birmingham
Whetstone, A. K., Sylacauga
White, D. A., Jr., Birmingham
White, W. E., Anniston
Wiesel, B. H., Birmingham
Wiley, C. C., Birmingham
Williams, D. J., Jr., Jasper
Williams, James, Sr., Jacksonville
Williams, Hayes, Birmingham
Williamson, Byrn, Birmingham
Wilson, C. H., Birmingham
Wilson, J. D., Birmingham
Wilson, R. L., Sipsey
Wiygul, C. H., Fairfield
Wood, F. R., Heflin
Wood, Garland, Birmingham
Wood, W. G., LaFayette
Woodall, Marvin, Birmingham
Woolley, A. P., Birmingham
Word, Buford, Birmingham
Wright, W. T., Spring Hill

Y

Yelton, C. L., Fairfield
Yoe, R. H., Birmingham
Young, A. C., Birmingham

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- Dr. J. F. Alison, Jr., Selma
 Dr. S. E. Andrew, Birmingham
 Dr. John Blalock, New Orleans
 Dr. Harold Blanton, Birmingham
 Dr. R. S. Bowling, Jr., Birmingham
 Dr. Barbara Bruegmann, Birmingham
 Dr. Robert C. Berson, Birmingham
 Dr. C. Lee Buxton, New Haven, Connecticut
 Dr. R. H. Carpenter, Birmingham
 Dr. S. B. Chenault, Birmingham
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 Dr. I. L. Myers, Montgomery
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 I. G. Box, Birmingham
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 Louise Cairns, Birmingham
 Bill Carter, Birmingham
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 Bob Davis, Mobile
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 E. A. Dodson, Jr., Birmingham
 James Dorough, Birmingham
 Buddy Dortch, Birmingham
 G. J. Drayton, Memphis
 B. J. Eich, Birmingham
 B. B. Ferguson, Birmingham
 W. L. Finch, Graceville, Florida
 H. T. Frost, Birmingham
 H. C. Foster, Birmingham
 J. W. Freison, Jr., Spring Hill, Alabama
 Archie Goldthwaite, Montgomery
 L. W. Hood, Montgomery
 C. H. Hinton, Birmingham
 W. J. Isaacks, Jr., Birmingham
 Mrs. W. J. Isaacks, Jr., Birmingham
 Robert Jemison, III, Birmingham
 A. B. Jones, Montgomery
 C. W. Jones, Columbus, Georgia
 Stanley Jones, Birmingham
 William Jordan, Montgomery
 Dr. C. E. Klapper, Birmingham
 Hugh Knight, New Orleans
 E. L. Kytle, Birmingham
 G. R. Lea, Birmingham
 D. D. Leaver, Birmingham
 Jack Lee, Montgomery
 Joe Lindsley, Birmingham
 E. D. McAdory, Jr., Birmingham
 Don McCain, Birmingham
 L. E. McCarty, Birmingham
 John McDavid, Mobile
 A. N. McKinney, Sheffield
 C. G. McLelland, Birmingham
 Mrs. Constance Marrs, Birmingham
 Mrs. Lillian G. Meade, Birmingham
 Bill Mankin, Atlanta
 M. M. Millican, Birmingham
 Tom Mithen, Montgomery
 LeRoy Montgomery, Atlanta
 J. W. Myers, Birmingham
 W. O. Pearce, Birmingham
 W. E. Quillian, Atlanta
 Charles Read, Mobile
 Mary G. Redden, Montgomery
 R. L. Rex, Lansdowne, Pennsylvania
 J. L. Richardson, Birmingham
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 Bill Smith, Birmingham
- J. D. Smith, Birmingham
 H. R. Snow, Jr., Birmingham
 F. Spann, Birmingham
 F. R. Stravs, Nutley, New Jersey
 B. A. Strozier, Jr., Birmingham
 I. M. Summers, Birmingham
 Kenneth E. Trim, Birmingham
 Betty Lane Troy, Birmingham
 R. M. Tuck, Chicago
 E. P. Turner, Atlanta
 Michael W. Wade, Bristol, Tennessee
 F. H. Walters, Sheffield
 Curt Wasson, Birmingham
 Curt Wasson, Jr., Birmingham
 George Webb, Birmingham
 George Wheeler, Chicago
 Jack Williamson, Montgomery
 R. H. Windham, Birmingham

Others

- N. E. Barker, Birmingham
 A. J. Bearman, Birmingham
 James E. Bryan, Summit, New Jersey
 R. F. Butts, Birmingham
 A. B. Cannon, Vredenburgh
 Thelma M. Coburn, Birmingham
 Irving Cohen, Montgomery
 Candler Crim, Decatur
 Audie Davis, Jr., Birmingham
 Mrs. L. C. Davis, Gordo
 W. A. Dozier, Jr., Montgomery
 Robert Estock, Birmingham
 V. O. Foster, Birmingham
 Fred S. Gachet, Lakeland, Florida
 L. B. Glover, Birmingham
 C. O. Hathaway, Birmingham
 J. E. Haynes, Birmingham
 Homer Hollifield, Birmingham
 J. H. Howell, Detroit, Michigan
 J. H. James, Birmingham
 Mrs. C. A. Lightcap, Mobile
 Richard E. Litt, Birmingham
 Carlos Lombardo, Birmingham
 N. L. Long, Birmingham
 C. P. Loran, Birmingham
 W. R. Lynn, Montgomery
 B. D. McAnnally, Birmingham
 Holt A. McDowell, Jr., Birmingham
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 Vergil L. Metts, Birmingham
 James S. Mitchell, Jr., Birmingham
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 Francis E. Nicholas, Birmingham
 William G. Null, Birmingham
 Jay B. Oliver, Chicago
 Betty Pendleton, Birmingham
 Charles C. Ramsey, Birmingham
 Ralph H. Rose, Birmingham
 Madge Sledge, Birmingham
 H. F. Singleton, Birmingham

Exhibitors

- H. E. Allen, Chicago
 H. H. Altman, Birmingham
 Doug Ballard, Birmingham

Barnes H. Smith, Alexander
City
Bernard Sykes, Montgomery

Katrina T. McArthur, Birming-
ham
F. D. Vail, Reform

L. G. Walker, Jr., Birmingham
Mrs. R. K. Wilson, Aliceville
Steve Yates, Birmingham

SUMMARY OF ANNUAL ATTENDANCE

Year	Life Counsellors	Active Counsellors	Delegates	Members	Auxiliary, Others	Total	Place
1925	27	78	97	328	113	643	Birmingham
1926	33	74	105	194	131	537	Mobile
1927	36	85	104	252	87	564	Montgomery
1928	33	77	108	507	106	831	Birmingham
1929	19	60	102	176	109	466	Mobile
1930	32	83	106	286	102	609	Montgomery
1931	26	80	116	410	158	790	Birmingham
1932	19	60	101	158	133	471	Mobile
1933	21	74	103	264	85	547	Montgomery
1934	26	75	97	404	53	655	Birmingham
1935	15	59	91	180	83	428	Mobile
1936	23	79	95	265	68	530	Montgomery
1937	25	80	96	396	81	678	Birmingham
1938	18	65	78	157	63	381	Mobile
1939	29	79	96	326	84	614	Montgomery
1940	29	77	105	401	229	841	Birmingham

Year	Life Counsellors	Active Counsellors	Delegates	Members	Auxiliary, Others	Total	Place
1941	29	66	86	211	91	483	Mobile
1942	33	75	105	249	82	544	Montgomery
1943	31	71	83	321	127	633	Birmingham
1944	33	72	92	214	110	521	Montgomery
1945	Meeting Cancelled						
1946	38	81	87	330	127	663	Birmingham
1947	34	76	91	333	124	658	Birmingham
1948	24	64	87	239	127	541	Mobile
1949	31	84	93	288	106	602	Montgomery
1950	26	85	91	391	118	711	Birmingham
1951	21	75	84	281	115	576	Mobile
1952	27	81	90	314	141	653	Montgomery
1953	24	81	91	403	129	728	Birmingham
1954	15	62	83	267	139	566	Mobile
1955	30	73	85	301	290	779	Montgomery
1956	26	77	91	421	171	786	Birmingham

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EXPLANATORY NOTES

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